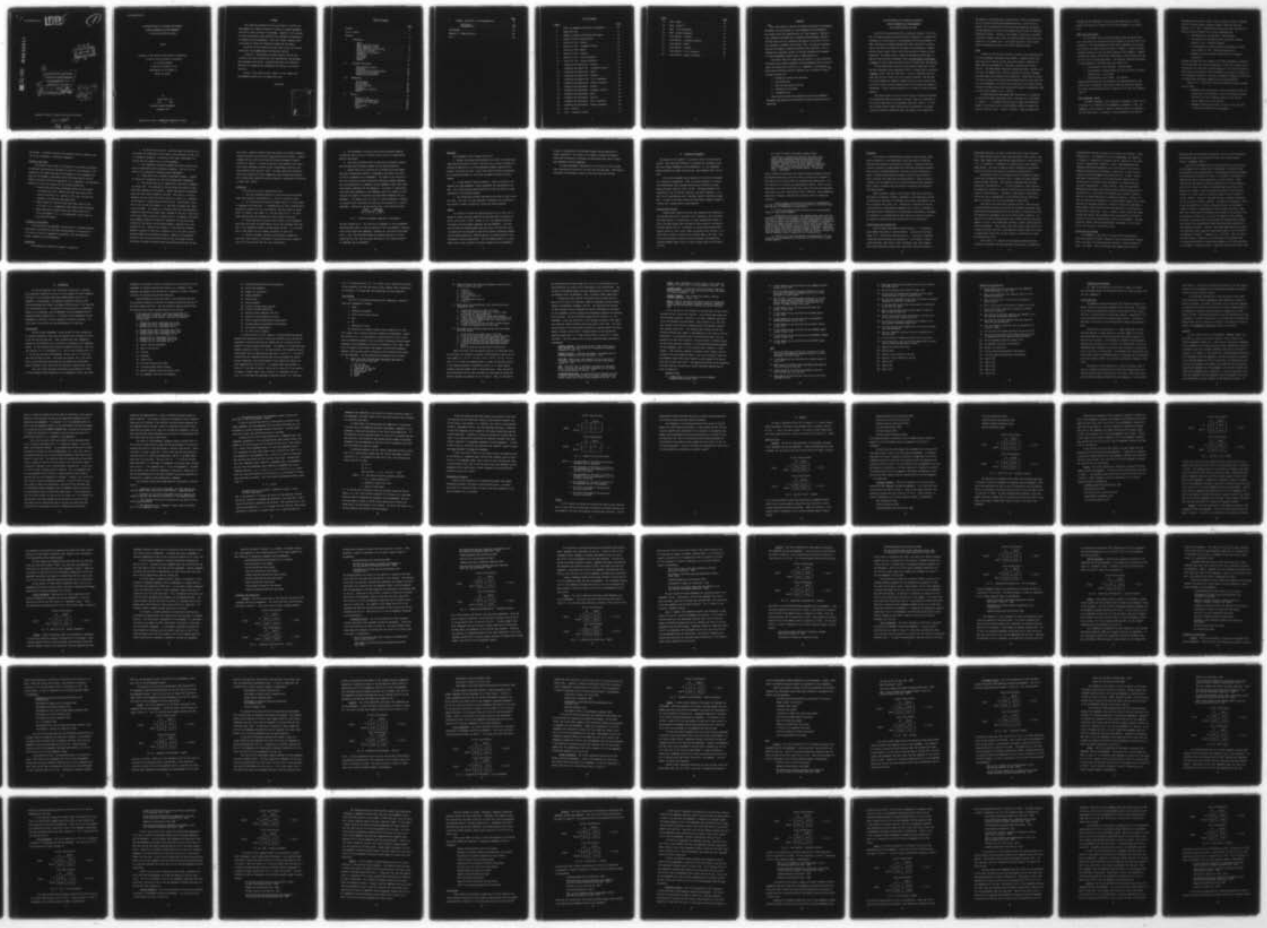
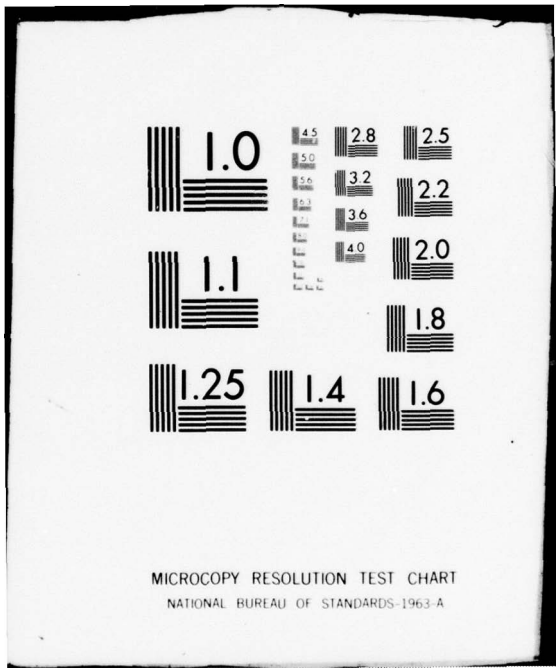
AD-A065 917 AIR FORCE INST OF TECH WRIGHT-PATTERSON AFB OHIO SCH--ETC F/G 5/10
AN INVESTIGATION OF ATTITUDINAL DIFFERENCES BETWEEN COMMANDERS --ETC(U)
SEP 78 S RUDD

UNCLASSIFIED AFIT/GSM/SM/78S-18 NL

1 OF 2

AD A065917




1.0
1.1
1.25
1.4
1.6
1.8
2.0
2.2
2.5
2.8
3.2
3.6
4.0
4.5
5.0
5.6
MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

AFIT/GSM/SM/78S-18

LEVEL II

(1)

AD A065917

DDC FILE COPY

DDC
RECEIVED
MAR 15 1979
C

(6)

AN INVESTIGATION OF ATTITUDINAL DIFFERENCES BETWEEN COMMANDERS AND NON-COMMANDERS IN THE UNITED STATES AIR FORCE

(9) Master's THESIS

(10) Steven Rudd Capt USAF

(14) AFIT/GSM/SM/78S-18

(11) Sep 78

(12) 34 p.

Approved for public release; distribution unlimited.

$12.225

79 03 13 009

AFIT/GSM/SM/78S-18

AN INVESTIGATION OF ATTITUDINAL DIFFERENCES BETWEEN COMMANDERS AND NON-COMMANDERS IN THE UNITED STATES AIR FORCE

THESIS

Presented to the Faculty of the School of Engineering
of the Air Force Institute of Technology
Air Training Command
in Partial Fulfillment of the
Requirements for the Degree of
Master of Science

by

Steven Rudd, B.S.
Capt USAF
Graduate Systems Management

September 1978

Approved for public release; distribution unlimited

79 03 13 009

Preface

This study was performed as part of my efforts to fulfill the requirements for a degree of Master of Science in Systems Management from the Air Force Institute of Technology. Hopefully it will provide Air Force policy-makers some insight to the attitudes and perceptions of commanders and non-commanders. With this insight, perhaps action can be taken to reduce the differences between the two groups.

Any errors in this treatise are mine alone, as are the opinions, conclusions, and recommendations (expressed or implied).

I thank Dr T. Roger Manley, my thesis advisor, who not only assisted in the topic selection but also provided help and encouragement throughout this effort. My appreciation also to Dr Charles W. McNichols for suggesting the methodology and helping to set up the data base.

Finally, I must thank my wife, "Janet", for her support and encouragement during this, our second, AFIT tour.

Steve Rudd

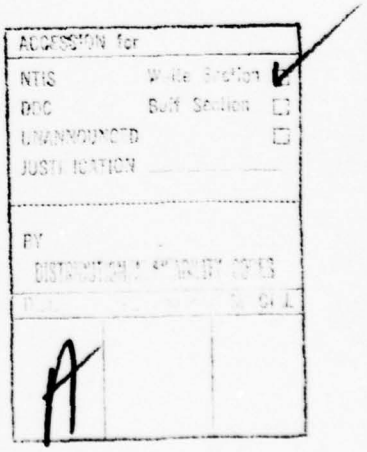


Table of Contents

		Page
Preface		ii
List of Figures		v
Abstract		vii
I.	Introduction	1
	AFMIG	2
	QOAFL Active Duty Survey	3
	QOAFL Commanders' Survey	3
	Second QOAFL Active Duty Survey	6
	Purpose of the Study	7
	Statements of the Problem	7
	Assumptions	7
	Limitations	9
	Advantages	11
	Summary	11
II.	Conceptual Background	13
	Organizational Conflict	13
	Alienation	15
	Centralization and Formalization	15
	Perceptions and Attitudes	17
	Summary and Conclusions	19
III.	Methodology	21
	The Data Base	21
	The Variables	24
	The AID Algorithm	31
	Procedure	32
	Presentation of Results	39
	Summary	40
IV.	Results	42
	Quality of Life	42
	Leadership and Supervision	51
	Standards and Enforcement	60
	Work	70
	Final Results	81
	Summary	92

		Page
V.	Summary, Conclusions, and Recommendations	94
	Conclusions	95
	Recommendations	104
Bibliography	. . . . .	105
Appendix A:	Common Questions	109
Vita	. . . . .	124

List of Figures

Figure		Page
1.	Effect of Commanders Among QOL-II Respondents	10
2.	Sample AID Tree	33
3.	Summary Information Provided by AID Program	34
4.	Example of Classification Charts	40
5.	Quality of Life: Colonels	42
6.	Quality of Life: Lieutenant Colonels	44
7.	Quality of Life: Majors	46
8.	Quality of Life: Captains	47
9.	Quality of Life: First Lieutenants	48
10.	Quality of Life: Second Lieutenants	49
11.	Leadership and Supervision: Colonels	51
12.	Leadership and Supervision: Lieutenant Colonels	53
13.	Leadership and Supervision: Majors	54
14.	Leadership and Supervision: Captains	56
15.	Leadership and Supervision: First Lieutenants	58
16.	Leadership and Supervision: Second Lieutenants	59
17.	Standards and Enforcement: Colonels	61
18.	Standards and Enforcement: Lieutenant Colonels	62
19.	Standards and Enforcement: Majors	64
20.	Standards and Enforcement: Captains	66
21.	Standards and Enforcement: First Lieutenants	67
22.	Standards and Enforcement: Second Lieutenants	69
23.	Work: Colonels	71
24.	Work: Lieutenant Colonels	72

Figure		Page
25.	Work: Majors	74
26.	Work: Captains	76
27.	Work: First Lieutenants	77
28.	Work: Second Lieutenants	79
29.	Final Results: Colonels	82
30.	Final Results: Lieutenant Colonels	84
31.	Final Results: Majors	85
32.	Final Results: Captains	88
33.	Final Results: First Lieutenants	90
34.	Final Results: Second Lieutenants	91

Abstract

This study sought to identify and analyze attitudinal and perceptual differences existing between Air Force commanders and non-commanders. Four subject areas were examined prior to a final analysis: Quality of Life, Leadership and Supervision, Standards and Enforcement, and Work. The data sources for this study were two Quality of Air Force Life surveys conducted in December 1976 and April 1977. The analysis technique used was the Automatic Interaction Detector (AID) algorithm. AID is a computerized, sequential analysis of variance technique which attempts to isolate homogeneous groups within a larger population.

The primary conclusion drawn from the analysis is that significant differences exist between commanders and non-commanders which are attributable to organizational position (i.e., commander or non-commander). While these differences manifest themselves over a variety of issues, the most recurrent are:

1. Frequency of contact with supervisor
2. Job satisfaction
3. Hours per week spent on the job
4. Perception of job growth
5. Information flow

Other issues on which some commanders and some non-commanders (dependent upon grade) held significantly different opinions were also identified.

AN INVESTIGATION OF ATTITUDINAL DIFFERENCES BETWEEN COMMANDERS AND NON-COMMANDERS IN THE UNITED STATES AIR FORCE

The use of the survey dates back to antiquity, though in its earlier uses it lacked the objectivity and scientific character of its modern form. An example of an early survey is that ordered by William the Conqueror in 1086, resulting in the famous Domesday Book which consisted of a description of the realm of England with the names of the proprietors, together with the nature, extent, value, liabilities and similar features of their properties. The modern survey is generally considered to have begun in 1886 with Charles Booth's monumental study (Life and Labour of the People of London) of poverty among the working class of London (Gee, 1950:304-305).

In the United States the social survey made its appearance in 1909 with the Pittsburgh survey undertaken by Paul U. Kellogg and his associates (Findings, 6 Vols., New York 1909-1914). It was in connection with this study that the term 'survey' was first applied (Carpenter, 1934:164-165). The survey movement has gradually changed from one of muck raking and destructive criticism to one of seeking a basis for constructive programs of improvement. Surveys have been applied to all facets of society and human endeavor.

The United States Air Force utilizes surveys to provide policymakers with information about the attitudes, opinions, ideas, and intentions of Air Force military and civilian personnel (AFR 30-23, 1976:2). In 1974, the Tri-annual Survey Program (which actually consisted of a bi-annual survey) was formally established under the auspices of the Comptroller.

The purpose of the program was to provide the Air Staff with information for use in future planning and programming actions. On the first of January 1976, the responsibility for the survey program was transferred from the Comptroller to the Air Force Deputy Chief of Staff for Personnel (USAF/DCS Personnel). January of 1977 brought a reduction in the number of periodic surveys to one a year, with special purpose surveys being conducted on an "as needed" basis. The survey data used in this research effort was gathered by several such "special purpose" surveys.

AFMIG

In March of 1975 the Chief of Staff of the Air Force established the Air Force Management Improvement Group (AFMIG), a temporary study group whose goal was to identify actions that would provide a foundation for human resources development on a long term, sustaining basis (Gray, 1975:76). The AFMIG members developed a theoretical model, the Quality of Air Force Life (QOAFL) model, which was designed to provide a framework with which they could accomplish their objectives. Based upon this model, a variety of surveys were constructed and administered to active duty military, base commanders, civilian Air Force employees, and military spouses. The data from these surveys were analyzed and reported to Headquarters USAF as staff reports (Manley, et al., 1977:ii).

The Human Resources Development (HRD) Directorate is an outgrowth of the original AFMIG study group, which in the words of Lt Gen Kenneth L. Talmann: "...is designed to balance mission needs with feelings of people in the service, and to continue AFMIG's efforts to improve the quality of the Air Force." (Carroll, 1975:63). Under the auspices of

the HRD, two post-AFMIG QOAFL surveys have been administered; a second survey of military and a survey of all Air Force commanders (O-6 through O-1).

QOAFL Active Duty Survey

The first QOAFL survey (henceforth AFMIG survey) was administered to a cross section of active duty military personnel in May and June of 1975. An analysis of the data gathered from the 10,996 respondents to the survey can be found in a thesis written by Thomas N. Thompson. Thompson's efforts involved an analysis of job satisfaction among Air Force members. Thompson concluded that some of the principal determinants of job satisfaction in the Air Force are job related perceptions. The three most important perceptions of those addressed in the AFMIG survey were found to be:

1. The perception of job challenge. (Job Challenge)
2. The perception of being prepared for future positions of greater responsibility. (Job Growth)
3. The perception of job freedom. (Job Freedom)

Thompson concluded that the job growth and job freedom perceptions were nearly equal in importance, while the job challenge perception appeared to be about two and one-half times as important as the other two (Thompson, 1975:77).

QOAFL Commanders' Survey

The QOAFL Commanders' survey (henceforth Commanders' survey) was administered to all (3400) Air Force commanders in December of 1976. The Commanders' survey contained a number of questions which also appeared on the 1975 AFMIG survey. An analysis of the data gathered from the 2695

respondents may be found in either a thesis written by Vernon L. Eshbaugh or an AFIT Technical Report authored by Manley, McNichols and Stahl. (Manley, et al., 1977). Eshbaugh found that the four most important predictors of job satisfaction for Air Force commanders were:

1. The perception of job challenge. (Job Challenge)
2. The perception of satisfaction with the personal standing aspects of life. (Personal Standing)
3. The perception of satisfaction with the leadership and supervision aspects of life. (Leadership/Supervision)
4. Whether or not the individual wanted the job of commander. (Job Desire)

Eshbaugh concluded that when compared to the AFMIG respondents, commanders: (a) perceive their jobs as more challenging, (b) perceive a higher level of satisfaction with the personal standing aspects of life, and (3) perceive a higher level of satisfaction with the leadership and supervision aspects of life (Eshbaugh, 1977:88-89). There was no attempt by Eshbaugh to rationalize or analyze these differences between the two survey populations.

Manley, et al. (1977:4-58), found the following differences between the two groups:

1. Commanders were more positive in their perceptions of both the overall quality of leadership in the Air Force and the leadership ability of their immediate supervisors than was the earlier sample of Air Force officers.
2. Commanders considered discipline in the Air Force to be more lax than did the AFMIG officer respondents.

3. Commanders reported higher satisfaction with the quality of their Air Force lives than did the AFMIG respondents.
4. Commanders reported a greater degree of job freedom than did the AFMIG officers.
5. Commanders appeared less likely to receive recognition for outstanding performance than the AFMIG officer respondents.
6. Commanders reported less frequent communication with supervisors than did the officer respondents to the AFMIG survey.
7. Commanders were much more favorable on the subject of the Air Force doing a good job of keeping them informed than were the AFMIG officer respondents.
8. Commanders were much more positive about the quality of airmen entering the Air Force than were the AFMIG respondents.

An extensive analysis of the differences between the commanders and the AFMIG respondents was not conducted, therefore no firm explanation for the difference could be advanced. However, some suggestions regarding the differences were offered. The fact that 52% of the commander respondents were O-5s or O-6s may explain the higher level of satisfaction with the quality of Air Force life. Infrequent communication with supervisors could be due to geographic separation between commanders and their superiors. Differences in attitudes and perceptions between the two groups may be the result of:

1. The commanders represent a relatively senior group of the Air Force population (i.e., 80% of the commanders had 12 or more years of service, while only 52% of the AFMIG respondents had 12 or more years of service), thus, a 'generation gap' may exist between the two groups of respondents.

2. One group of respondents is commanders, while the other is not. Therefore response patterns may have been influenced by the respondent's position in the organization (i.e., a commander may, by virtue of his organizational position, possess a different perspective of Air Force life than a non-commander).
3. A shift in Air Force attitudes may have taken place during the 18 months that passed between the administering of the two surveys.

Whatever the cause(s), Eshbaugh and Manley and his associates, all recognized the existence of significant differences in the attitudes and perceptions of the two survey populations.

Second QOAFL Active Duty Survey

A second QOAFL survey (henceforth QOL-II) was developed and administered in April of 1977, just four months after the Commanders' survey. Once again a representative sample of active duty military were questioned regarding their attitudes, perceptions, and satisfaction with Air Force life. To date a complete analysis of the data gathered from the 10,687 respondents to the survey has not been undertaken. However, two features of the QOL-II are worthy of note: first, the QOL-II contained 75 questions which were identical to ones which appeared on the Commanders' survey; second, the time period between the two surveys is too short to expect a significant attitudinal shift on the part of the respondents (i.e., it seems reasonable to assume that responses obtained in April of 1977 would be the same as responses obtained in December of 1976 and vice versa). Thus, it also seems reasonable to anticipate that any differences between commanders and QOL-II respondents could not be attributed to the effects of a time lag between the

two surveys. A complete listing of the questions which are common to the two survey instruments is contained in Appendix A.

Purpose of the Study

The purpose of this study is to determine if significant differences in attitudes and perceptions regarding Air Force life (as reflected in the responses to the common questions) exist between Air Force commanders and other Air Force members, and whether these differences seem to be attributable to position within the organization (i.e., commander or non-commander). Supportive of this basic purpose are the following objectives:

1. Assuming that attitudinal differences (which are attributable to position) do exist, identify the areas where these differences are manifest (i.e., quality of life, work, policies and standards, and leadership and supervision).
2. Where appropriate, identify those areas where action at the unit level (i.e., by commanders) might reduce these differences.
3. Where appropriate, identify those areas where action by Air Force policymakers (i.e., at the headquarters level) might reduce these differences.

Statement of the Problem

Given the QOL-II and Commanders' survey data for 75 common questions, what factors associated with attitudes and perceptions of the quality of Air Force life serve to segregate the respondents into two homogeneous groups, commanders and non-commanders?

Assumptions

The assumptions on which this research is based are:

1. The survey data are valid. Since the author had nothing to do with either the preparation of the survey or the collection of data, this is a necessary assumption. Discussion of this under "Advantages" will indicate why this appears to be a valid assumption.

2. The respondents truthfully answered the survey questions and did not intentionally provide facetious responses. This will also be shown to be an appropriate assumption under "Advantages".

3. Enough data exist to perform a meaningful analysis. Reasons for making this assumption will also be discussed under "Advantages".

4. The original data can be treated from a statistical standpoint as interval data. The responses to the two surveys are ordinal at best, while many responses will be nominal. Nominal data makes no assumptions about the values being assigned to the data. Each value is a distinct category, and the value itself merely serves as a label (e.g., responses to the question of gender would be nominal data). Ordinal data is such that it can only be rank ordered (i.e., less than or greater than labels can be assigned). For example, on a question which has seven responses, a response of seven may be greater than a response of one, but it may or may not be seven times as great as a response of one. Furthermore, the difference between a response of seven and a response of six may not be perceived to be the same as the difference between a response of six and a response of five. Interval data, however, is such that the difference between a response of seven and a response of six is the same as the difference between any two adjacent responses. Whether or not parametric statistics can be used with ordinal data has been the subject of much discussion, the general consensus among statisticians being that this may

not be done. However, Labovitz states that except for extreme situations, interval statistics can be applied to any ordinal-level variable. Labovitz contends that any small error resulting from the treatment of ordinal variables as interval, is offset by the use of more powerful, more sensitive, better developed, and more clearly interpretable statistics with known sampling error (Labovitz, 1970). Nie adds, that while statistical purists may disagree with these suggestions, more and more data analysts are following them, especially when the research is exploratory or heuristic in nature (Nie, 1975:6).

Limitations

The limitations of this research effort are:

1. Only the information asked for by the survey can be analyzed; other areas cannot be investigated (e.g., religion, political views).

2. In a multiple choice survey instrument there is a finite number of responses to any questions. A respondent may not find a response which accurately reflects his or her true feelings, and thus chooses an answer which is "closest", even though it is not very close at all. The information derived from such responses may then be totally inaccurate.

3. Survey data may be biased by local effects, the circumstances under which the survey was administered, the way the respondent felt that day, or the respondent's general attitude toward surveys. It is believed that a large sample size will negate any effects of local bias.

4. People's attitudes, opinions, and differences change over time; while this presents no difficulty in analyzing the data, potential users of the results must take this into consideration.

5. The respondents to the two surveys were guaranteed anonymity, so there was and is no way to follow-up survey results by requestioning specific individuals.

6. The survey instruments were not specifically designed to gather data for measuring differences between the two sample populations.

7. Because there was no accurate way to determine how many commanders were included among the QOL-II respondents, the author classified all QOL-II respondents as non-commanders. The impact of this decision is that this study may be actually analyzing differences between commanders and a mixed population of commanders and non-commanders rather than differences between commanders and non-commanders. The effect of inadvertently classifying some commanders as non-commanders would be a tendency to minimize the true degree of difference existing between commanders and non-commanders. For example (refer to Figure 1), assume commanders' responses to a question were distributed such that the mean response was 2, and non-commanders' responses to the same question had a distribution such that

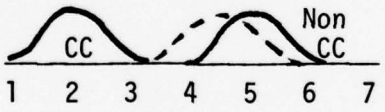


Fig. 1. Effect of Commanders Among QOL-II Respondents

the mean response was 5. The inclusion of commanders in the non-commander population would result in the distribution of the "non-commander" responses being shifted toward the commanders' responses (as indicated by the dashed curve). Thus, the difference between the response patterns of the two groups would be less than the actual difference in the response patterns of commanders and non-commanders.

Advantages

The advantages of this research effort are:

1. Because the surveys were developed in an effort to achieve goals established by the Chief of Staff of the Air Force, a group of experts was selected to develop the survey and measurement schemes, administer the surveys, and collect the data. These facts should eliminate any questions as to the appropriateness of the survey instrument and data collection methods.

2. A large amount of data was gathered. Almost 10,700 QOL-II respondents and 2,700 Commanders' survey respondents are represented by the data. This large data base should effectively offset the effects of minor aberrations in the response patterns.

3. The surveys were strongly supported by the Chief of Staff of the Air Force. This fact, plus the guarantee of anonymity, are considered to have served to create a climate for sincere and candid responses.

Summary

In an effort to assess the perceived quality of Air Force life, a number of surveys have been conducted and analyzed under the auspices of the Air Force Chief of Staff. Manley, et al., and Eshbaugh identified differences existing between commanders and non-commanders. The facts that 18 months had elapsed between the two surveys, and that the survey instruments were not designed to specifically measure differences between the two sample populations, rendered analysis or rationalization of the differences relatively meaningless. With the administration of a second QOAFL survey, which contained 75 questions appearing on the Commanders'

survey, an investigation of differences between the two populations is greatly simplified. This thesis is an attempt to identify and analyze significant differences in attitudes and perceptions which serve to segregate commanders from non-commanders.

To insure meaningful interpretation of the results, certain assumptions concerning the validity of the data base have been made. Additionally, limitations and advantages relative to the study have been provided.

II. Conceptual Background

The purpose of this chapter is to provide a basis for answering the question: Why study the differences in attitudes and perceptions which may exist between commanders and non-commanders, i.e., the commanded? Before attempting to answer that question, some foundation must first be laid.

An Air Force commander may be equated to a top level line manager in an industrial organization. Thus, his primary purpose is to accomplish organizational goals through the effective utilization of human beings and other resources (Terry, 1977:4). The human element of the organization is by far the most important, and least understood. It is this lack of understanding that is the major cause of ineffective management. In order to deal more effectively with people, managers attempt to increase their understanding of human behavior.

Organizational Conflict

Organizational behaviorists have long recognized the complexities involved when dealing with the human side of enterprise. Davis maintains that human behavior in organizations is rather unpredictable because it arises from deep seated needs and nebulous value systems of individually different people (1977:3). Furthermore, as people with different backgrounds, points of view, values, needs, and personalities interact, it is likely that a variety of conflicts will develop (Davis, 1977:416). Conflict may be defined as tensions, hostile attitudes, and antagonistic interests between groups, even if an open struggle does not exist (Borg, 1971:67).

In a study of conflict and change, Lourenco states:

> "Traditionally, organizational theorists have been interested in the interaction between worker productivity and organizational performance, and the interaction of the individual organization and the social system in which it operates. Conflict, per se, has been viewed as undesirable, as detrimental to the organization (Urwick, 1943; Taylor, 1947). In the best of all possible worlds, it should not exist." (1976:1190)

Argyris (1962) has pointed out that tensions between divergent individual and organizational goals, which are likely to arise, must be reduced or else there can be a serious impact on organizational effectiveness. Conflict may exist in virtually any organizational setting. Even in such organizations as prisons and military units, where officials have apparently total power, one still finds conflict (Kelly, 1969:519). Some contemporary propositions (Albanese, 1975:264-265) concerning conflict include the following:

1. Conflict always arises within the context of interdependence. But just as interdependencies are the source of conflict, they also represent the basis of cooperation in organizations.

2. Conflict can emerge from the similarities in the requirements (needs) of organizational members.

3. Differences in the views of top managers about values that the organization should reflect and goals the organization should pursue can be the source of conflict that permeates the entire organization. Particularly at the top levels of an organization, basic differences in the needs and values of its members can give rise to situations wherein each member is attempting to assure dominance of his or her own value system. Such differences in values, needs, goals, behavioral styles, mannerisms, and motivations are causes of conflict with which everyone is familiar. These differences may appear trivial and irrational to those not directly involved, but they are important causes of human conflict in organizations.

4. Conflict is an inevitable feature of organizational life that arises out of interdependencies, differences, and similarities of organizational members.

Alienation

In an analysis of organizational alienation, Aiken and Hage (1966) define alienation as a two dimensional entity consisting of alienation from work and alienation from expressive relations. Alienation from work reflects a feeling of disappointment with career and professional development, as well as disappointment over inability to fulfill professional norms. Alienation from expressive relations reflects dissatisfaction in social relations with supervision and fellow workers. These two types of alienation can be compared with two of those discussed by Marx (Bottomore, 1963), namely, alienation from the process of production and alienation from fellow workers.

Other researchers (Seeman, 1959; Blauner, 1964) have found that as the degree of alienation increases, commitment to the organization and the collective goals decreases, as reflected in the rates of absenteeism, turnover, accidents, work errors, etc. Cumulatively, alienation and the concurrent decline in organizational commitment can, in turn, be expected to have dysfunctional consequences for organizational effectiveness. The degree of alienation in an organization has been found to be directly related to the degree of centralization and formalization in the organization.

Centralization and Formalization

Aiken and Hage (1966) define centralization as, "...the degree to which members participate in decision-making." Pugh and his associates (Pugh, et al., 1963) define centralization as, "...the focus of authority to make decisions affecting the organization." The findings of several studies (Blauner, 1964; Pearlin, 1962: Tannenbaum, 1956, 1961) suggest that highly centralized organizations, those with little participation in

agency-wide decisions, are likely to have high rates of work alienation. Still other studies (Blauner, 1964; Burns and Stalker, 1961; Crozier, 1963; Kover, 1964) suggest that organizations characterized by a rigid hierarchy (i.e., a "closeness" or "tightness") of authority have little cohesion among workers. This lack of cohesion may be interpreted as the manifestation of alienation from expressive relations discussed earlier.

Formalization refers to the degree of work or procedural standardization and the amount of deviation that is allowed from these standards (Aiken and Hage, 1966:499). Blau and Scott (1962:240) have described bureaucratic formalization as, "...official procedures...which prescribe the appropriate reactions to recurrent situations and furnish established guides for decision-making." Therefore, a high degree of formalization implies not only a preponderance of rules defining jobs and specifying what is to be done, but also the enforcement of those rules.

The study of two French public agencies (Crozier, 1963) which had an almost obsessive reliance on routines and procedures, found that these organizations were characterized not only by workers' dissatisfaction with the conditions of employment, but also by little worker solidarity. In a study of an Air Force tracking station, Gross (1953) noted that the great emphasis on rules in the organization resulted in workers feeling that the work was meaningless. Other studies (Udy, 1957; Worthy, 1953) confirm the findings of Crozier and Gross; a high degree of worker alienation is found in organizations which place too much reliance on codification of tasks and observance of rules.

Evans (1977), in a study of the relationship between hierarchy, alienation, commitment, and organizational effectiveness, considered the

organizational hierarchy to consist of four facets, or dimensions. These dimensions are: (a) inequality of skills and knowledge, (b) inequality of rewards, (c) inequality of authority, and (d) inequality in the distribution of organizational information. Evans' study demonstrated that employees who perceived themselves to be on the low end of the various dimensions experience work alienation, in particular, a sense of powerlessness and self-estrangement from their work role. He adds, "Clearly, some types of organizations, such as administrative agencies and the military, may on the whole be more hierarchical in structure than most industrial organizations..." (Evans, 1977:94). Aiken and Hage (1966) demonstrated that highly centralized and highly formalized organizational structures (e.g., the military) are characterized by greater alienation than are less centralized and less formalized structures. Likewise, in a study of scientists and engineers in a large aerospace company, Miller (1967) observed that employees working for "directive" supervisors experienced a higher degree of work alienation than those working for "participatory" or "laissez-faire" supervisors. Thus, in summary, several studies have demonstrated that conflict and alienation within an organization are directly related to the existing organizational climate (or environment). One must recognize, however, that the organizational environment is not only what exists, but also what is perceived to exist.

Perceptions and Attitudes

Joan Woodward, a key figure in the search for understanding of social and technical variables, reported on current organizational research efforts and models and cautioned against assuming a "simple deterministic view". She states: "What an individual does depends not only on the

nature and force of environmental influences, but also on how he perceives and interprets them, on his attitudes to work, and on other personal factors." (Woodward, 1970:7).

Louis (1977) concluded that one's needs and values drive and direct his development; one's current state of development in interaction with the presenting situation determines his current needs and provides feedback for evaluation and validation of values. An individual's value/need set comprises the internal forces operating in a given situation. Sieler (1967) states that needs are primitive tendencies to act and are applied only to self; "values are frames of reference people use to assess the goodness of an object...they are internalized, personal versions of what should be so...values tend to be applied to others as well as himself..." (Sieler, 1967:61). The way an individual defines a situation constitutes for him its reality (Allport, 1955:84). The impact of environment or situational characteristics on stimulus interpretation has also been demonstrated in research on organizational climate (Tagiuri and Litwin, 1968). Mohr (1977) states that the background and attitudes of the supervisor must be expected to influence his or her style of supervision; while Downey, Hellriegel, and Slocum (1977) have concluded that organizational founders tend to define the organizational domains based upon their perceptions of environmental attributes. They add, "Once these domain decisions are made, the organization tasks required by these domains define a set of relevant environmental attributes." (Downey, et al., 1977:164). Thus, the organizational climate is created by (a) the attributes of environments that are created and defined for organizational members, and (b) characteristics of the members' perceptual process. Theoretical work by Likert (1961, 1967)

and empirical work by Franklin (1975a, 1975b) view policies and behavior of highest level managers as setting the climate for conditions and procedures within an organization. These conditions and procedures influence or constrain the behavior of managers at the next lower level. While behavior at this next level is constrained, these managers too may influence conditions and procedures for succeeding lower levels of management, adding to the constraints imposed from above. Drexler (1977), in a study of the homogeneity of organizational climate, concluded that top level management had the greatest influence in establishing and maintaining a homogeneous organizational climate. In other words, the organizational climate established at the top was the one which permeated the entire organization.

Summary and Conclusions

Based upon current organizational theory and the work of numerous researchers, it appears reasonable to propose the following:

1. Air Force commanders (i.e., top level managers from the viewpoint of the members of the unit) will attempt to establish and maintain an organizational environment (or climate) based upon their individual perceptions, attitudes, needs, and value systems.

2. Air Force non-commanders will interpret the organizational environment based upon their individual perceptions, attitudes, needs, and value system.

3. Significant differences in perceptions, etc., between commanders and non-commanders may reasonably be expected to create an organizational environment that is fertile ground for the breeding and perpetuation of conflict, alienation, and similar dysfunctional consequences which may seriously impact organizational effectiveness.

Thus, the reason for studying the differences, real or perceived, between commanders and non-commanders, is to gain insight to some of the factors which may create an organization wherein effectiveness and efficiency are seriously hampered. In an age of restrained budgets and reduced manpower levels, it is necessary that each organization be as efficient as possible in the utilization of all resources, human or otherwise. A knowledge of the differences between commanders and non-commanders should be of value to Air Force policy-makers and managers at all levels. For knowledge of these differences is the first step in effectively dealing with (i.e., reducing or eliminating) these factors which may serve as roadblocks to organizational effectiveness.

III. Methodology

To test the hypothesis that significant differences in attitudes and perceptions regarding Air Force life exist between Air Force commanders and other Air Force members based upon organizational position (i.e., commander or non-commander), the Automatic Interaction Detector (AID) algorithm developed by Sonquist and Morgan (1970) was used. (The Algorithm will be described later.) The objective of the analysis was to determine whether or not commanders and non-commanders could be segregated from an integrated sample population (i.e., consisting of both commanders and non-commanders) on the basis of their responses to identical questions. The first step in the analysis was the establishment of a data base.

The Data Base

The two surveys (*Commanders' survey and QOL-II*) were reviewed and 78 variables (questions) along with the responses were extracted from each of the two original data sets. These variables were then renumbered 1 through 78, and henceforth will be referred to according to this numbering scheme. Two new variables were created and added to each case. The first new variable, 79, is a dichotomous (i.e., zero or one) variable which is a "1" if the case came from the Commanders' survey, and a "0" if the case came from the QOL-II survey. The second new variable, 80, is the individual's job satisfaction score based upon the Hoppock Job Satisfaction Measure (Hoppock, 1935), which will be discussed in greater detail later.

Thus, the initial data base consisted of the responses of 13,382 Air Force members (2,695 respondents to the Commanders' survey, and 10,687

respondents to the QOL-II) across 78 variables plus two variables for each respondent to indicate organizational status (i.e., commander or non-commander) and degree of job satisfaction. Appendix A contains a complete listing of the variables and possible responses.

Upon reviewing the initial data base, it was determined that the nine available responses to questions 34 through 56 would make analysis of the data extremely difficult. Thus the responses required simplification. The questions and original response choices are as follows:

> Listed below are 23 factors or policies which affect Air Force personnel. Using the scale listed immediately below, please rate each of the factors. Mark only one response for each item.
>
> 1. Standard too strict, enforcement too strict
> 2. Standard too strict, enforcement about right
> 3. Standard too strict, enforcement too lax
>
> 4. Standard about right, enforcement too strict
> 5. Standard about right, enforcement about right
> 6. Standard about right, enforcement too lax
>
> 7. Standard too lax, enforcement too strict
> 8. Standard too lax, enforcement about right
> 9. Standard too lax, enforcement too lax
>
> 34. Overall personal appearance.
>
> 35. Wear of the uniform.
>
> 36. Haircuts.
>
> 37. Mustaches.
>
> 38. Beard policy.
>
> 39. Military courtesy and customs.
>
> 40. Personnel weight control program.
>
> 41. What my immediate supervisor expects of me.
>
> 42. My commander's policies and procedures.

43. Officer/enlisted on-the-job relationships.

44. Drills and ceremonies.

45. Respect for supervisors.

46. Safety procedures.

47. Working hours.

48. Leave procedures.

49. Living in on-base family housing.

50. Living in on-base dormitories.

51. Quality of work expected on the job.

52. Quantity of work expected on the job.

53. Officer supervisor/subordinate relationships.

54. Enlisted supervisor/subordinate relationships.

55. Unit mission accomplishment.

56. Air Force life in general.

To simplify analysis of the responses a recoding scheme was devised whereby each response was used to create two variables; one to reflect the respondent's attitude concerning the standard and one to reflect the respondent's attitude regarding enforcement. For example, if an individual responded to question 34 with a "1", two new variables, S34 (standard) and E34 (enforcement) would be generated and coded with a value of "1". This would indicate that the respondent believed that both the standard for overall personal appearance, and the enforcement of the standard for overall personal appearance were "too strict". In creating these new variables, a value of "1" was used to indicate "too strict"; a value of "2" was used for a response of "about right"; and, a value of "3" represented "too lax". Thus, if an individual had responded to question 34 with a "2", S34 would

be a "1" and E34 would be a "2". As a result of this recoding and creation of new variables, the final data base for this research effort consisted of 126 variables: Q1 through Q80, S34 through S56, and E34 through E56.

The Variables

The first six variables provided specific demographic information about each respondent as follows:

1. Grade.
2. Command of assignment.
3. Total active military service.
4. Race.
5. Sex.
6. Aeronautical rating.

The remaining 121 variables concern various aspects of Air Force life, duties, and as already discussed, standards and enforcement. Some of the variables (e.g., sex, aeronautical rating) were felt to be of little value in determining whether or not attitudinal differences existed between commanders and non-commanders and were not considered in this study. Questions 19 through 22 were based on the Hoppock Job Satisfaction Measure (Hoppock, 1935) and were used to calculate a job satisfaction score (Q80) for each respondent. The four questions and responses are as follows:

19. Which one of the following shows how much of the time you feel satisfied with your job?

    1. All the time
    2. Most of the time
    3. A good deal of the time
    4. About half the time
    5. Occasionally
    6. Seldom
    7. Never

20. Choose the one of the following statements which best tells how well you like your job.

    1. I hate it
    2. I dislike it
    3. I don't like it
    4. I am indifferent to it
    5. I like it
    6. I am enthusiastic about it
    7. I love it

21. Which one of the following best tells how you feel about changing your job?

    1. I would quit this job at once if I could
    2. I would take almost any other job in which I could earn as much as I am earning now.
    3. I would like to change both my job and occupation
    4. I would like to exchange my present job for another one
    5. I am not eager to change my job, but I would do so if I could get a better job
    6. I cannot think of any jobs for which I would exchange
    7. I would not exchange my job for any other

22. Which one of the following shows how you think you compare with other people?

    1. No one likes his job better than I like mine
    2. I like my job much better than most people like theirs
    3. I like my job better than most people like theirs
    4. I like my job about as well as most people like theirs
    5. I dislike my job more than most people dislike theirs
    6. I dislike my job much more than most people dislike theirs
    7. No one dislikes his job more than I dislike mine

Before the overall job satisfaction score for an individual could be calculated, the responses to question 19 and question 22 had to be reverse coded (i.e., "1"="7", "2"="6", "3"="5", "4"="4", "5"="3", "6"="2", and "7"="1") to make the response pattern to these two questions similar to the response patterns of questions 20 and 21 (i.e., lowest numeric response indicates highest level of dissatisfaction). Then, the overall job satisfaction score for each individual was calculated by summing the numeric responses to questions 19, 20, 21 and 22. Thus, an individual's

job satisfaction score could range from a low of 4 (a high degree of job dissatisfaction) to a high of 28 (a high degree of job satisfaction). The validity of the Hoppock measure has been demonstrated in previous research by Eshbaugh (1977), and McNichols, Stahl, and Manley (1978) among others.

The data base also contains 18 variables used to assess the nine Quality of Air Force Life Indicators (QOAFLIs) developed by doctors Manley, Gregory, and McNichols (Eshbaugh, 1977:22). Two questions were provided for each indicator; one to determine the relative importance of the factor to the respondent, and one to measure the respondent's degree of satisfaction with the factor. Due to differences between the two surveys (i.e., the Commanders' survey and the QOL-II) in the responses available to the importance questions, these variables could not be used in this study. The satisfaction aspect of the nine factors had identical response options and could, however, be used in this effort. Response choices to the satisfaction question ranged from ("1"), "highly dissatisfied" to seven ("7"), "highly satisfied". The nine factors are as follows (question number indicated in parentheses):

ECONOMIC STANDARD: Satisfaction of basic human needs such as food, shelter, clothing; the ability to maintain an acceptable standard of living. (8)

ECONOMIC SECURITY: Guaranteed employment; retirement benefits; insurance; protection for self and family. (10)

FREE TIME: Amount, use, and scheduling of free time alone, or in voluntary associations with others; variety of activities engaged in. (16)

WORK: Doing work that is personally meaningful and important; pride in my work; job satisfaction; recognition for my efforts and my accomplishments on the job. (18)

LEADERSHIP/SUPERVISION: My supervisor has my interests and that of the Air Force at heart; keeps me informed; approachable and helpful rather than critical; good knowledge of the job. (30)

EQUITY: Equal opportunity in the Air Force; a fair chance at promotion; an even break in my job/assignment selections. (63)

PERSONAL GROWTH: To be able to develop individual capacities, education/training; making full use of my abilities; the chance to further my potential. (66)

PERSONAL STANDING: To be treated with respect, prestige; dignity; reputation; status. (73)

HEALTH: Physical and mental well-being of self and dependents; having illnesses and ailments detected, diagnosed, treated and cured; quality and quantity of health care services provided. (78)

Out of the total of 126 variables in the data base, 62 were finally selected for use in the initial analysis. The variables were placed into four different categories: Quality of Life, Work, Leadership and Supervision, and Standards and Enforcement. Some variables (e.g., Q30, Q60) were included in more than one category because they seemed to apply to each category equally well. The variables were divided into the four categories because they seemed to lend themselves to this type of division. Additionally, it was believed that by dividing the variables into four categories for the initial analysis, it would be easier to identify those variables which were most "powerful" in differentiating between commanders and non-commanders, than if all 62 variables were included in a single category. Then, the most "powerful" variables in each category could be included in the final analysis efforts. Two of the variables, Grade (Q1) and Commander status (Q79), were included in every category (for reasons which will be made clear later). The remaining variables and the categories into which they were placed are as follows (possible responses may be found in Appendix A):

Quality of Life

8. To what degree are you satisfied with the ECONOMIC STANDARD aspects of your life?

10. To what degree are you satisfied with the ECONOMIC SECURITY aspects of your life?

11. How do you think your military pay (including all allowances and fringe benefits) compares with pay in civilian employment for similar work?

12. The Air Force is providing enough information to its members to permit them to determine the current status of actions which may impact on their fringe benefits (commissary, retirement, medical care, etc.)

16. To what degree are you satisfied with the FREE TIME aspects of your life?

18. To what degree are you satisfied with the WORK aspects of your life?

30. To what degree are you satisfied with the LEADERSHIP/ SUPERVISION aspects of your life?

63. To what degree are you satisfied with the EQUITY aspects of your life?

66. To what degree are you satisfied with the PERSONAL GROWTH aspects of your life?

73. To what degree are you satisfied with the PERSONAL STANDING aspects of your life?

78. To what degree are you satisfied with the HEALTH aspects of your life?

WORK

11. How do you think your military pay (including all allowances and fringe benefits) compares with pay in civilian employment for similar work?

18. To what degree are you satisfied with the WORK aspects of your life?

19. Which one of the following shows how much of the time you feel satisfied with your job?

20. Choose the one of the following statements which best tells how well you like your job.

21. Which one of the following best tells how you feel about changing your job?

22. Which one of the following shows how you think you compare with other people?

23. How do you evaluate your present Air Force job?

24. Do you think your present job is preparing you to assume future positions of greater responsibility?

25. For your next assignment, do you want a job which has greater responsibility than your current job?

26. Do you feel that the work you are now doing is appropriate to the grade you hold?

27. What is your estimate of the average number of hours per week you spend on the job?

28. The Air Force requires me to participate in too many activities that are not related to my job.

58. How often do you and your supervisor get together to set your personal performance objectives?

59. How often are you given feedback from your supervisor about your job performance?

60. Does your immediate supervisor give you recognition for a job well done?

61. Are you given the freedom you need to do your job well?

64. On the same jobs as men, do Air Force women tend to do more, less, or about the same amount of work?

80. Hoppock job satisfaction score.

S47. Working hours.

S51. Quality of work expected on the job.

S52. Quantity of work expected on the job.

E47. Same as S47.

E51. Same as S51.

E52. Same as S52.

Leadership and Supervision

30. To what degree are you satisfied with the LEADERSHIP/ SUPERVISION aspects of your life?

31. What is your opinion of the leadership ability of your immediate supervisor?

32. What is your opinion of the quality of leadership in the Air Force?

33. What is your opinion of discipline in today's Air Force?

57. The Air Force does a good job of keeping me informed about what is going on.

58. How often do you and your supervisor get together to set your personal performance objectives?

59. How often are you given feedback from your supervisor about your job performance?

60. Does your immediate supervisor give you recognition for a job well done?

61. Are you given the freedom you need to do your job well?

76. Most of the Senior NCOs (E7-E9) understand and are able to communicate with the people who work with them.

S41. What my immediate supervisor expects of me.

S42. My commander's policies and procedures.

S45. Respect for supervisors.

S53. Officer supervisor/subordinate relationships.

S54. Enlisted supervisor/subordinate relationships.

E41. Same as S41.

E42. Same as S42.

E45. Same as S45.

E53. Same as S53.

E54. Same as S54.

Standards and Enforcement

33. What is your opinion of discipline in today's Air Force?

Also S34 through S56 and E34 through E56, which are listed on pages 22 and 23, and in Appendix A.

The AID Algorithm

The Automatic Interaction Detector (AID) Algorithm (Sonquist and Morgan, 1970) was the analytic technique used in this study. AID imposes few limitations concerning the scaling or distribution of the variables and thus, is easily applied to survey data analysis. Assumptions of linearity and additivity are not necessary when using AID. An additional advantage is the ability of the AID algorithm to handle large amounts of data.

Starting with a single group (i.e., sample population), the AID algorithm performs a one-way analysis of variance (ANOVA) on the total group based upon the division which provides the greatest reduction in the error sum of squares. The procedure is repeated on each subsequent subgroup until the group size is too small for consideration or until the explanatory power (reduction in the error sum of squares) of any possible split is too small to be meaningful. The parameters for minimum group size and minimum increase in explanatory power are selectable and are determined by the user based on sample size and other considerations (Sonquist, 1969: 85-86).

The output of the AID algorithm is a tree-like display, shown in Figure 2, showing the successive splits and visually depicting the variables which best explain the variations in the data. Other output which provides detailed summary information on each subgroup, is also available

(see Figure 3). The ability to display the structure of the data greatly assists in the interpretation of the relationships between the predictor variables and the criterion variable.

In his doctoral dissertation for the University of Texas, Gooch (1972) used AID to identify homogeneous groups defined by a variety of predictor variables. He stated, "In essence, AID is a heuristic approach to searching the raw data for structure and is purely a mechanization of the procedure a researcher might go through in hypothesizing a model." (Gooch, 1972:66) A detailed description of the AID algorithm can be found in Appendix C of Gooch's dissertation or the original work by Sonquist and Morgan (1970), while a discussion of analysis of variance can be found in Chapter 14 of Mathematical Statistics (Freund, 1971:393-404).

Procedure

In this research effort, the dichotomous "commander status" variable (Q79) was used as the criterion variable. Thus, the goal is to identify homogeneous subsets (i.e., consisting of a majority of commanders or non-commanders) of the sample population under consideration, which can be defined on the basis of common responses across the set of predictor variables. For example, if one started with a sample population consisting of 50 commanders and 50 non-commanders, and after analyzing the responses of the 100 group members on one of the predictors, the population was divided into two subgroups of 50 members each, wherein one of the subgroups contained 45 commanders and 5 non-commanders (and the other subgroup contained 45 non-commanders and 5 commanders), it would be reasonable to conclude that commanders and non-commanders could be segregated on the basis of the differences in their responses on that predictor variable. Of

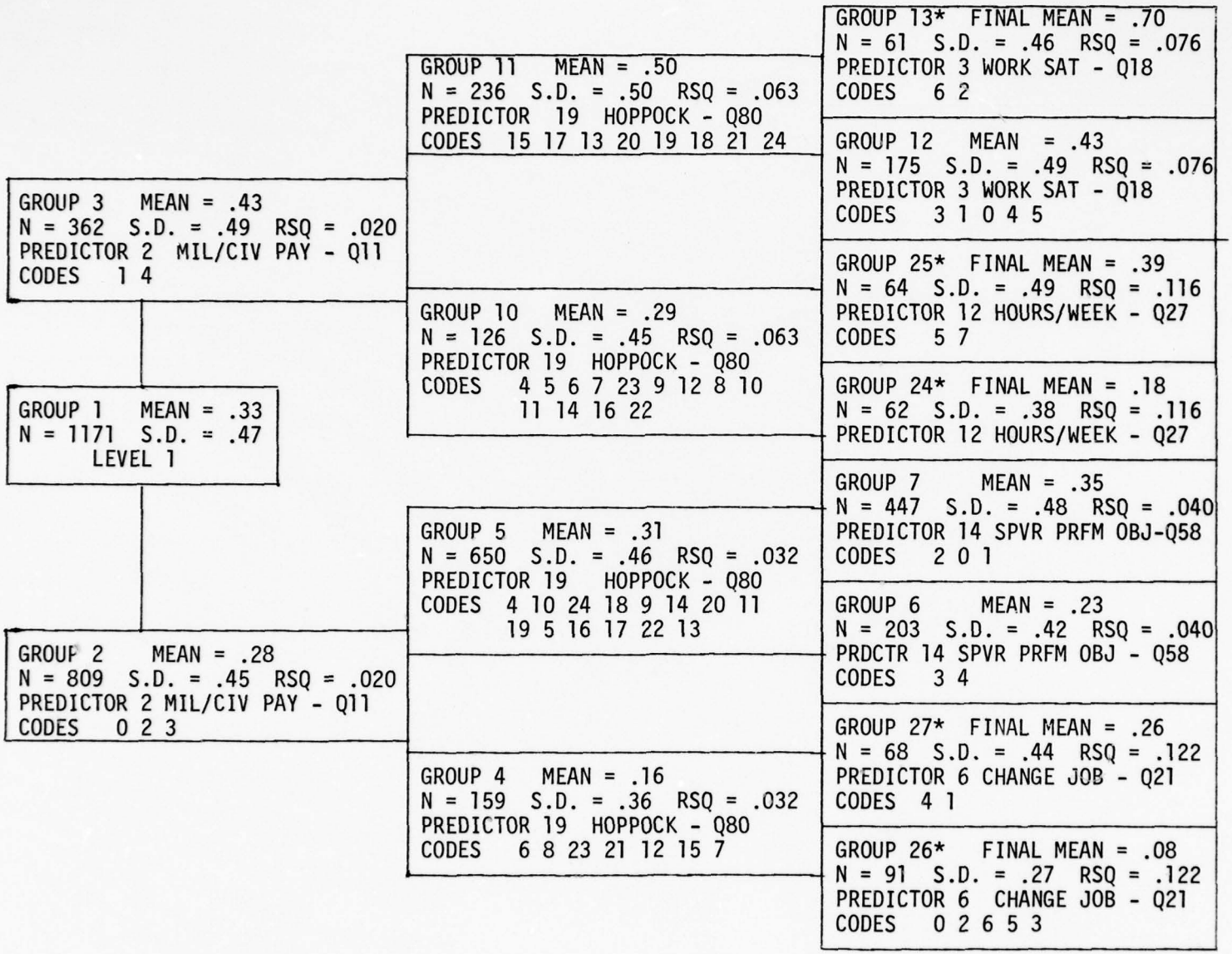


Fig. 2. Sample AID Tree

SPLIT GROUP 5 ON PREDICTOR 14 SPVR PRFM OBJ-Q58 INTO GROUP 6 WITH CODES 3 4
AND GROUP 7 WITH CODES 2 0 1

BSS = 2.0912137 BSS/TSS = .01502 T-VALUE 3.14

CURRENT SUMMARY

NCF	TOTAL TSS	TOTAL BSS	TOTAL WSS	R-SQUARED	R	F-RSQ	DF1	DF2	F-ANOVA	DF1	DF2
4	257.03672	10.347949	246.68877	.04025864	.20065	9.8928	1	1167	16.3175	3	1167

CANDIDATE GROUPS ARE AS FOLLOWS.

GROUP	N	TOTAL WEIGHT	SUM OF Y	SUM Y-SQUARE	T S S	MEAN	STD. DEV.
7	447	447.00000	156.00000	156.00000	101.55705	.34899329	.47665184
3	362	362.00000	154.00000	154.00000	88.486188	.42541436	.49440569
6	203	203.00000	46.000000	46.000000	35.576355	.22660099	.41863227
4	159	159.00000	25.000000	25.000000	21.069182	.15723270	.36402003

Fig. 3. Summary Information Provided by AID Program

course, it would not necessarily follow that the difference in the response patterns of the two groups was due to one group being commanders and one group being non-commanders. For example, if all the commanders were O-6s and all the non-commanders were O-1s, and the predictor had been the degree of satisfaction with the ECONOMIC STANDARD (Q8), one might be hard-pressed to justify the differences in responses as being solely the result of organizational position (i.e., commander or non-commander).

Due to the realization that such problems as just described might occur, a plan was developed which, it is hoped, will reduce, if not eliminate, such potential problems. It was decided that the best way to reduce the possible influences of certain demographics (e.g., age, rank, pay) on the response patterns, was to select sample populations consisting of individuals of equal rank. The selections would be accomplished by using Grade (Q1) as a predictor variable in every analysis, and limiting the range of "acceptable" responses to only the grade under consideration. In this way, all "out of range" responses would be rejected. Thus, O-6 commanders and O-6 non-commanders would constitute a sample population which would be analyzed over the four categories of variables. Likewise, O-5s, O-4s, O-3s, O-2s, and O-1s would be grouped and analyzed. It was felt that by using this scheme to analyze the populations, one might be more confident that any differences between commanders and non-commanders would be the result of organizational position rather than other causes. It was planned that after an initial analysis of each of the six groups (i.e., O-6 through O-1), the predictors from each category which were used to isolate the final sub-groups would be combined and used to analyze each group once again. The validity of this method of analysis, although not using the AID

algorithm, was demonstrated in a study of differences between groups by Mathis (1976:45). This method of analysis will hopefully serve to identify those areas (as reflected in the predictor variables) where commanders and non-commanders differ the most. Areas of significant attitudinal differences which are common to all ranks will be especially important, since one might conclude that these differences are the result of organizational position rather than any other single factor.

The choice of the dichotomous "commander status" variable (Q79) as the criterion variable greatly simplified the establishment of criteria for assessing the results of the AID program as applied to this effort. Referring again to Figure 3 (page 34), it can be seen that the AID program provides the value of N (total group population), SUM OF Y, and MEAN (among other data) for each group. The use of the "0" - "1" criterion variable means that SUM OF Y is the number of commanders in the group under consideration (since Y = 1 for commanders and Y = 0 for non-commanders). The MEAN for any group is the fraction of commanders in the group. Another way to look at the MEAN would be to say that the MEAN of any group represents the probability of a member of that group being a commander.

The following criteria were established for the analysis of the AID results:

1. Regardless of the initial group MEAN, any final subgroup with a MEAN of greater than .050 would be classified as a "commander group".

2. Regardless of the initial group MEAN, any final subgroup with a MEAN of less than .050 would be classified as a "non-commander group".

3. Final subgroup size would be limited to no less than 5% of the initial group population.

4. The population of all "commanders' groups" would be combined into a "final commanders' group".

5. The populations of all "non-commanders' groups" would be combined into a "final non-commanders' group".

In order to evaluate the ability of the predictor variables to segregate commanders from non-commanders (and vice versa) the author will use the method of "overall percentage correctly classified". To better understand this concept, the following discussion is provided.

Starting with an initial group population of c commanders and n non-commanders (therefore N = c+n), and applying the above stated criteria, the members of the initial group will be placed into one of two "final" groups (i.e., either "final commanders group" or "final non-commanders group"). It is reasonable to expect that neither "final" group will be "pure" (i.e., 100% commanders or non-commanders) but, in fact, will consist of some members who have been placed into the incorrect final group. Assuming that the "final commanders group" contains c_c commanders and n_c non-commanders, and the "final non-commanders group" contains c_n commanders and n_n non-commanders (where $c_c + c_n = c$, and $n_c + n_n = n$), a total of $c_c + n_n$ individuals will have been correctly classified and $c_n + n_c$ individuals will have been incorrectly classified. Thus, the "overall percentage correctly classified" is:

$$K = (c_c + n_n)/N$$

(recognize that K is a fraction, although the author is using the term "percentage")

Now, if the objective is to assess the ability of the predictor variables and the AID algorithm to segregate the population, one should have a starting point from which a comparison may be drawn. That starting point is the initial group population. If it is assumed, for now, that the initial group population is such that n is greater than c (i.e., there are more non-

commanders than commanders), and one were to classify the entire group as non-commanders, the result would be n/N classified correctly; but c/N would be classified incorrectly.

In other words, the starting point for comparing K is the greater of either n/N or c/N (depending upon which individuals, commanders or non-commanders, constitute the majority of the initial group population). If the predictors and the algorithm result in a value of K no greater than the starting point, then nothing has been gained and the attempt to segregate commanders from non-commanders on the basis of their responses across this set of predictors has been for naught.

To determine whether or not the "overall percentage correctly classified" (K) is significantly greater than the "initial percentage correctly classified" (i.e., the greater of either n/N or c/N), the following statistical test will be used:

H_o: $K^* = I$

H_1: $K^* > I$

Test Statistic: $t = (K - I)/((I)(1 - I)/N)^{\frac{1}{2}}$

Where: K^* = true overall fraction correctly classified

$K = (c_c + n_n)/N$, estimate of K^*

I = greater of either c/N or n/N

α = level of significance

If t is statistically significant, then the variables chosen and the procedure (i.e., AID, classification scheme for final groups, etc.) have some degree of power to segregate the commanders and non-commanders, and also have some degree of power to predict future observations correctly (although that is not the purpose of this effort). Of course, the larger K is, the more powerful the variables and the procedure.

It must be pointed out here that because of the nature of AID (seeking structure and the interaction effects of the predictor variables) the initial group in any analysis is, in general, only "split" on one predictor variable. Subsequent "splits", over the remaining predictors, culminating in the final subgroups, are of subsets of the original population, not the original population. Therefore, it would be incorrect to conclude that because "t" was statistically significant all predictor variables were significantly "powerful" in segregating commanders from non-commanders. It would be more correct to state that the predictors were "powerful" enough to segregate some commanders from some non-commanders.

If after the initial "split" of the initial group, one subgroup could be classified as a "commander group" and the other subgroup could be classified as a "non-commanders group", and a value of K was calculated and found to significantly differ from I, then one could state that commanders and non-commanders differ significantly in their responses to the variable which resulted in the initial "split".

Presentation of Results

Results of the analyses will be presented by grade, with summary information provided in the form of classification charts. Two charts (see Figure 4), initial and final, for each of the four categories of predictor variables will be provided.

Initial Classification

Actual		CC	Non-CC
	CC	A	B
	Non-CC	C	D

I =

Final Classification

Actual		CC	Non-CC
	CC	A	B
	Non-CC	C	D

K =

Fig. 4. Example Classification Charts

Where: A = the percentage of individuals classified as commanders who are commanders.

B = the percentage of individuals classified as non-commanders who are commanders (i.e., incorrectly classified).

C = the percentage of individuals classified as commanders who are non-commanders (i.e., incorrectly classified).

D = the percentage of individuals classified as non-commanders who are non-commanders.

I = the initial percentage of the population correctly classified.

K = the overall percentage of the population correctly classified.

Summary

In this chapter the author has presented the steps by which the data base for this effort was established, the predictor variables selected, and the categories into which the predictor variables were classified. The AID

algorithm was briefly described and the way in which the algorithm would be utilized to analyze the data base was discussed.

The procedure for classifying and testing the results of the AID program for significance was described. It was pointed out that firm conclusions regarding the significance of all predictors in segregating commanders and non-commanders would not be possible due to the nature of the AID algorithm; but, that firm conclusions could be drawn regarding the significance of the predictor which created the first "split" of the initial group population. Finally, the format for presentation of the results for each population considered was discussed in detail.

IV. Results

For ease in comparison across the six grades (i.e., colonel through second lieutenant), the results are presented first by category (Quality of Life, ..., etc.), and then by grade. All results, unless stated otherwise, were significant at an α level of at least 0.05 (t-statistic = 1.645).

Quality of Life

Colonels. The initial group population of 1205 members consisted of 391 commanders and 814 non-commanders. Using the methodology described in Chapter III, the initial and final classifications are shown in Figure 5.

Initial Classification

Actual \ Initial	CC	Non-CC
CC	32.4%	32.4%
Non-CC	67.6%	67.6%

I = 67.6%

Final Classification

Actual \ Final	CC	Non-CC
CC	58.4%	27.7%
Non-CC	41.6%	72.3%

K = 70.1%

Fig. 5. Quality of Life: Colonels

Of the eleven predictors (other than grade (Q1) and Commanders Status (Q79)), only six were needed to achieve the final value of K of 70.1% (overall percentage correctly classified). These six variables, in descending order or importance, are as follows (question number in parentheses):

Leadership/Supervision Satisfaction (Q30)

Military vis-a-vis Civilian Pay (Q11)

Economic Security Satisfaction (Q10)

Free Time Satisfaction (Q16)

Work Satisfaction (Q18)

Personal Growth Satisfaction (Q66)

The response patterns to questions 30 and 10 seemed directly related to whether or not the respondent group was composed of a majority of commanders.

On both issues the data suggest that commanders were more satisfied with these aspects of their lives than were non-commanders. A subsequent comparison of colonels' responses to question 30 showed that 79.2% of the commanders perceived a high level of satisfaction with the leadership and supervision facet of their lives, while 64.6% of the non-commanders felt the same degree of satisfaction. A similar comparison of responses to question 10 revealed that 59.4% of the commanders indicated a high degree of satisfaction with their economic security, whereas 46.6% of the non-commanders held the same view.

Lieutenant Colonels. The initial population of 1738 individuals consisted of 856 commanders and 882 non-commanders. The initial and final classification are shown in Figure 6. Seven of the eleven predictors were necessary to obtain the final value for K of 67.1%. These variables, in order of importance, are as follows (question number in parentheses):

Work Satisfaction (Q18)

Equity Satisfaction (Q63)

Leadership/Supervision Satisfaction (Q30)

Free Time Satisfaction (Q16)

Economic Security Satisfaction (Q10)

Economic Standard Satisfaction (Q8)

Health Satisfaction (Q78)

Initial Classification

		CC	Non-CC
Actual	CC	49.3%	49.3%
	Non-CC	50.7%	50.7%

I = 50.7%

Final Classification

		CC	Non-CC
Actual	CC	70.5%	35.2%
	Non-CC	29.5%	64.8%

K = 67.1%

Fig. 6. Quality of Life: Lieutenant Colonels

The combination of responses across these seven variables permitted a relatively successful segregation of commanders and non-commanders. After the initial population was split on the first predictor, work satisfaction (Q18), it was possible to correctly classify 62.6% of the individuals (with a t-statistic of 9.884). The data indicated that lieutenant colonel commanders perceived a higher level of satisfaction with the work (Q18), equity (Q63), and economic standard (Q8) aspects of their lives than did non-commanders.

Comparison of lieutenant colonel responses to question 18 showed that 66.7% of the commanders indicated a high degree of satisfaction with the work aspect of their lives, while only 40.7% of the non-commanders indicated the same level of satisfaction. A similar comparison on question 63 revealed that 23.3% of the commanders felt highly satisfied with the equity aspect of their lives, whereas 11.6% of the non-commanders felt the same. Finally, to the issue of their economic standard, 51.5% of the commanders indicated high satisfaction, while only 34.3% of the non-commanders expressed the same level of satisfaction.

On the issue of free time (Q16) however, the data suggest that commanders were less satisfied than non-commanders. A comparison of responses to question 16 showed that 58.7% of the commanders expressed low satisfaction with this facet of their lives, while 48.7% of the non-commanders indicated the same low level of satisfaction.

Majors. The initial population of 1359 majors consisted of 597 commanders and 762 non-commanders. Initial and final classifications are shown in Figure 7. Five predictors were sufficient to attain the final value for K of 68.7%. These variables, in order of importance, are as follows (question number in parentheses):

Leadership/Supervision Satisfaction (Q30)

Work Satisfaction (Q18)

Military vis-a-vis Civilian Pay (Q11)

Fringe Benefit Information (Q12)

Free Time Satisfaction (Q16)

Initial Classification

Actual	CC	Non-CC
CC	43.9%	43.9%
Non-CC	56.1%	56.1%

I = 56.1%

Final Classification

Actual	CC	Non-CC
CC	64.7%	28.4%
Non-CC	35.3%	71.6%

K = 68.7%

Fig. 7. Quality of Life: Majors

In this case, after the initial population split on question 30, it was possible to correctly classify 63.9% of the individuals (with a t-statistic of 5.794). The response patterns to the questions of leadership and supervision satisfaction (Q30), and work satisfaction (Q18), suggest that among majors, commanders were more satisfied with these aspects of their lives than were non-commanders. Comparison of responses to question 18 showed 82.4% of the commanders perceived a high level of satisfaction with the work issue, while 61.7% of the non-commanders held the same perception. Looking at the issue of leadership and supervision, 56.1% of the commanders indicated a high degree of satisfaction with this aspect of their lives, whereas only 31.2% of the non-commanders felt the same. These findings, for majors, were consistent with those for colonels and lieutenant colonels.

Captains. The initial population of 1298 captains consisted of 446 commanders and 852 non-commanders. Initial and final classifications are shown in Figure 8. Only four of the predictors were necessary to achieve

Initial Classification

Actual		CC	Non-CC	
	CC	34.4%	34.4%	I = 65.6%
	Non-CC	65.6%	65.6%	

Final Classification

Actual		CC	Non-CC	
	CC	62.2%	27.2%	K = 70.6%
	Non-CC	37.8%	72.8%	

Fig. 8. Quality of Life: Captains

the final value for K of 70.6%. These variables, in order of importance, are as follows: (question number in parentheses):

Leadership/Supervision Satisfaction (Q30)

Equity Satisfaction (Q63)

Work Satisfaction (Q18)

Military vis-a-vis Civilian Pay (Q11)

There was a very clear pattern of responses for three of the variables, which could be associated with whether or not the respondent group consisted of a majority of commanders. On the question of how total military compensation compares with civilian pay for similar work (Q11), the results indicated that commanders perceived they would be better compensated in a civilian environment. Comparison of captain responses to question 11 showed that 72.8% of the commanders felt that their military compensation was too low, while 63% of the non-commanders felt the same.

First Lieutenants. The initial population of 727 first lieutenants consisted of 75 commanders and 652 non-commanders. Initial and final classifications are shown in Figure 9. The value of K, 89.8%, is not

Initial Classification

Actual	CC	Non-CC
CC	10.3%	10.3%
Non-CC	89.7%	89.7%

I = 89.7%

Final Classification

Actual	CC	Non-CC
CC	52.2%	8.9%
Non-CC	47.8%	91.1%

K = 89.8%

Fig. 9. Quality of Life: First Lieutenants

significantly different from I, the maximum percentage of the population possible to initially classify correctly. However, it should be noted that the ability to correctly classify commanders improved by more than a factor of five (i.e., from 10.3% to 52.2%). Only four variables were necessary to obtain the final classification. These variables, in order of importance, are as follows: (question number in parentheses):

Leadership/Supervision Satisfaction (Q30)

Equity Satisfaction (Q63)

Fringe Benefit Information (Q12)

Free Time Satisfaction (Q16)

The responses to the question of leadership and supervision (Q30), and the question of fringe benefit information (Q12) showed a close relationship to the composition of the response groups.

The data suggest that commanders were more satisfied with the leadership and supervision aspect of their lives than were non-commanders (a trend which was consistent with the other commanders' groups). Comparison of responses to question 30 by first lieutenants showed that 73.5% of the commanders perceived a high degree of satisfaction with this issue, while only 51.4% of the non-commanders perceived the same level of satisfaction.

On the subject of fringe benefit information (Q12), 38.1% of the commanders felt the Air Force was doing a good job of keeping them informed, whereas 26.4% of the non-commanders felt the same.

Second Lieutenants. Starting with an initial population of 567 second lieutenants (29 commanders and 538 non-commanders), it was not possible to classify any final group as a "commanders' group". Thus it was impossible to improve upon the initial classification shown in Figure 10.

		Initial Classification: CC	Initial Classification: Non-CC	
Actual	CC	4.7%	4.7%	I = 95.3%
	Non-CC	95.3%	95.3%	

Fig. 10. Quality of Life: Second Lieutenants

Summary. Certain trends were noted in the responses of commanders to the various questions included in the Quality of Life category. Where response patterns could be clearly discerned, and reasonably associated with the commander status of the respondent, the data suggested that most

commanders perceive a higher level of satisfaction with the quality of their lives than do most non-commanders. It appears that being a commander in some way compensates for many of the less positive aspects of Air Force life.

In two instances commanders indicated reservations regarding the Quality of Life. Lieutenant colonel commanders were less satisfied with the free time aspect of their lives than were non-commanders. Captain commanders perceived that the level of compensation for their services was less than what civilian organizations paid for similar work.

For three groups, Lieutenant Colonels, Majors, and Captains, it was possible to segregate commanders from non-commanders to a degree that was significant well beyond the 0.0005 level. For one group, Second Lieutenants, it was not possible to isolate a single commanders' group on the basis of responses across the eleven predictors. First lieutenants and colonels were also less easily segregated into commander and non-commander groups. The author believes that the relatively low number of lieutenants who are commanders made classification of these groups difficult or impossible. For colonels, however, another possible explanation is offered.

For colonels, it seems reasonable to assume that by the time the individual has attained that rank, he/she has at one time been in a command position. Once having been a commander (or vice-commander), an individual's attitudes do not appear to differ significantly from those of individuals who are presently commanders. It also appears reasonable to assume that the attitudes of individuals who have spent a major part of their lives being evaluated on how well they conform to Air Force standards would not differ significantly, regardless of whether or not they are commanders.

Based on the number of groups (i.e., colonels, lieutenant colonels, etc.) they appeared in, the following Quality of Life issues seemed to be most important in segregating commanders and non-commanders:

Leadership/Supervision Satisfaction (all six groups)

Work Satisfaction (five groups)

Equity Satisfaction (four groups)

Free Time Satisfaction (four groups)

Economic Security Satisfaction (three groups)

Personal Growth Satisfaction (two groups)

Health Satisfaction (two groups)

Fringe Benefit Information (two groups)

Economic Standard Satisfaction (one group)

Leadership and Supervision

Colonels. The initial population of 1210 colonels consisted of 414 commanders and 796 non-commanders. The initial and final classifications are shown in Figure 11. Only three of the original nineteen predictor

Initial Classification

		CC	Non-CC	
Actual	CC	34.2%	34.2%	I = 65.8%
	Non-CC	65.8%	65.8%	

Final Classification

		CC	Non-CC	
Actual	CC	63.2%	29.5%	K = 69.5%
	Non-CC	36.8%	70.5%	

Fig. 11. Leadership and Supervision: Colonels

variables were necessary to obtain the final value for K of 69.5%. These variables, in order of importance, are as follows (question number in parentheses):

Leadership/Supervision Satisfaction (Q30)

How often do you and your supervisor get together to set your personal performance objectives? (Q58)

Enforcement of enlisted supervisor/subordinate relationships (E54)

The response pattern for colonels to the question of leadership and supervision (Q30) was discussed under the Quality of Life category. The responses to the other two questions indicated that commanders got together with their supervisors less frequently than non-commanders (Q58), and that commanders felt the enforcement of enlisted supervisor and subordinate relationships (E54) was too lax. Comparison of the colonels' responses to question 58 revealed that 56.4% of the commanders seldom or never met with their supervisors, while only 43.1% of the non-commanders experienced such infrequent contact with their supervisors. The responses to E54 showed that 42.8% of the commanders believed the relationships between enlisted supervisors and subordinates were too lax. While only 29.1% of the non-commanders indicated the same perception.

Lieutenant Colonels. The initial population of 1804 lieutenant colonels consisted of 936 commanders and 868 non-commanders. Initial and final classifications are shown in Figure 12. The seven variables shown shown below were necessary to achieve the final value of K of 66.3% (question number in parentheses):

The Air Force does a good job of keeping me informed about what is going on (Q57).

Enforcement of enlisted supervisor/subordinate relationships (E54).

How often do you and your supervisor get together to set your personal performance objectives? (Q58)

Leadership/Supervision Satisfaction (Q30)

Quality of Air Force Leadership (Q32)

Leadership ability of immediate supervisor (Q31)

How often are you given feedback from your supervisor about your job performance? (Q59)

Initial Classification

Actual	CC	Non-CC
CC	51.9%	51.9%
Non-CC	48.1%	48.1%

I = 51.9%

Final Classification

Actual	CC	Non-CC
CC	67.2%	34.7%
Non-CC	32.8%	65.3%

K = 66.3%

Fig. 12. Leadership and Supervision: Lieutenant Colonels

Two of the variables, Q57 and E54, split the entire population. After the split on these two predictors it was possible to correctly classify 61.3% of the population (with a t-statistic of 8.011). The data suggest, that while commanders feel the Air Force is doing a good job of keeping them informed (Q57), non-commanders do not hold the same viewpoint. Comparing the responses of lieutenant colonels on this issue showed that 77.3% of the commanders agreed the Air Force was doing a good job of keeping them informed; however, only 55.8% of the non-commanders agreed.

On the subject of enlisted supervisor and subordinate relationships (E54), commanders felt enforcement was too lax. A total of 39.6% of the lieutenant colonel commanders indicated enforcement was too lax, while only 24.3% of the non-commanders held the same perception. The data also implied that among lieutenant colonels, commanders were more satisfied with the leadership and supervision aspect of their lives (Q30) than were non-commanders. On question 30, 57.0% of the commanders indicated high satisfaction, while only 39.1% of the non-commanders indicated high satisfaction.

Finally, commanders seemed to hold higher opinions of the quality of Air Force leadership (Q32) than did non-commanders. For lieutenant colonels, 67.3% of the commanders indicated the quality of Air Force leadership was above average or excellent, whereas 57.3% of the non-commanders held the same opinion.

Majors. The initial population consisted of 645 commanders and 735 non-commanders. The initial and final classifications are shown in Figure 13. Five variables were sufficient to obtain a final value of 69.0%

Initial Classification

		CC	Non-CC
Actual	CC	46.7%	46.7%
	Non-CC	53.3%	53.3%

I = 53.3%

Final Classification

		CC	Non-CC
Actual	CC	68.7%	30.8%
	Non-CC	31.3%	69.2%

K = 69.0%

Fig. 13. Leadership and Supervision: Majors

After the first split of the initial group on the issue of how well the Air Force does at keeping its members informed (Q57), it was possible to properly classify 64.1% of the population (with a t-statistic of 8.093). All five variables, in order of importance, are as follows (question number in parentheses):

> The Air Force does a good job of keeping me informed about what is going on. (Q57)
>
> Enforcement of enlisted supervisor/subordinate relationships (E54)
>
> Leadership/Supervision Satisfaction (Q30)
>
> Enforcement of respect for supervisors (E45)
>
> How often do you and your supervisor get together to set your personal performance objectives? (Q58)

The data suggest that while commanders are "getting the word", non-commanders are not. Among majors, 78.0% of the commanders felt the Air Force was doing a good job of keeping them informed (Q57), while only 48.0% of the non-commanders held the same perception. This is similar to the trend for lieutenant colonels.

Again, it appears that commanders perceive the enforcement of standards to be too lax, while non-commanders do not agree. On the issue of enlisted supervisor and subordinate relations (E54), 42.4% of the commanders indicated enforcement was too lax, whereas only 23.6% of the non-commanders gave the same response. Regarding respect for supervisors (E54), 53.4% of the commanders felt enforcement was too lax, while only 38.2% of the non-commanders held the same opinion. The issue of leadership and supervision satisfaction was discussed under the Quality of Life category; these results repeated the earlier ones.

Captains. The initial population of 1308 captains consisted of 478 commanders and 830 non-commanders. Initial and final classifications are shown in Figure 14. Four variables were sufficient to attain the final value for K of 72.6%. Two of the variables, Q57 and E45, were very

Initial Classification

Actual	CC	Non-CC
CC	36.5%	36.5%
Non-CC	63.5%	63.5%

I = 63.5%

Final Classification

Actual	CC	Non-CC
CC	61.5%	20.1%
Non-CC	38.5%	79.9%

K = 72.6%

Fig. 14. Leadership and Supervision: Captains

significant in discriminating between commanders and non-commanders. After the entire population initially split on Q57, it was possible to correctly classify 67.0% of the members (with a t-statistic of 2.699). After the entire population split a second time, on E45, it was possible to correctly identify 70.7% of the members (with a t-statistic of 5.455). All four predictors, in order of importance, are as follows (question number in parentheses):

> The Air Force does a good job of keeping me informed about what is going on. (Q57)
>
> Enforcement of respect for supervisors (E45)

Leadership/Supervision Satisfaction (Q30)

Most of the Senior NCOs (E7-E9) understand and are able to communicate with the people who work with them. (Q76)

On the issue of information flow (Q57), the results for captains strongly suggest not only a continuation of the trend for lieutenant colonels and majors, but also, a widening area of disagreement between commanders and non-commanders. While 72.3% of the captain commanders agreed that the Air Force was doing a good job of keeping them informed, only 36.6% of the non-commanders felt the same.

On the question of respect for supervisors (E45), the area of disagreement between commanders and non-commanders also appeared to widen over that for the majors' group. Among captains, 59.1% of the commanders indicated enforcement was too lax, while only 36.1% of the non-commanders gave the same response. The question of leadership and supervision satisfaction was discussed under the Quality of Life category. The results here merely duplicate the previous results. On the subject of Senior NCOs (Q76), there was an indication that commanders doubted the ability of these individuals more than did non-commanders. A comparison of responses by captains showed that 18.1% of the commanders felt that Senior NCOs could not understand or communicate with their co-workers, while 12.4% of the non-commanders felt the same.

First Lieutenants. The initial population of 709 first lieutenants consisted of 82 commanders and 627 non-commanders. Initial and final classifications are shown in Figure 15. Only three variables were necessary to achieve the final value for K of 89.0%; but this was not significantly different from I. It should be noted however, that the ability to correctly

Initial Classification

Actual		CC	Non-CC
	CC	11.6%	11.6%
	Non-CC	88.4%	88.4%

I = 88.4%

Final Classification

Actual		CC	Non-CC
	CC	55.6%	9.2%
	Non-CC	44.4%	90.8%

K = 89.0%

Fig. 15. Leadership and Supervision: First Lieutenants

classify commanders based on the interaction of the three variables improved from 11.6% to 55.6%. The three variables, in order of importance, are as follows (question number in parentheses):

> The Air Force does a good job of keeping me informed about what is going on. (Q57)
>
> Enforcement of enlisted supervisor/subordinate relationships (E54)
>
> Leadership/Supervision Satisfaction (Q30)

The responses of first lieutenants to these three questions paralleled the responses of the other groups. The issue of leadership and supervision satisfaction among first lieutenants was discussed under the Quality of Life category. On the subject of keeping informed (Q57), 71.2% of the first lieutenant commanders agreed that the Air Force was doing a good job, while only 37.1% of the non-commanders felt the same. Comparing the responses of first lieutenants to the question of enlisted supervisor

and subordinate relationships (E54) showed that 45.8% of the commanders believed enforcement was too lax, whereas 17.6% of the non-commanders held the same belief.

Second Lieutenants. Starting with a population consisting of 28 commanders and 547 non-commanders, it was impossible to identify any final group as a "commanders' group". Therefore, the initial classification shown in Figure 16, could not be improved upon.

		Initial Classification: CC	Initial Classification: Non-CC	
Actual	CC	4.9%	4.9%	I = 95.1%
	Non-CC	95.1%	95.1%	

Fig. 16. Leadership and Supervision: Second Lieutenants

Summary. Some response patterns emerged in the category of Leadership and Supervision which seemed directly related to the commanders status of the respondent. The area of widest disagreement between commanders and non-commanders concerned information flow (Q57). A clear majority (76.3%) of the commanders believed the Air Force was doing a good job of keeping them informed, while less than half (49.7%) of the non-commanders agreed. On the subject of Air Force standards (E54 and E45), the data suggest commanders perceive enforcement to be too lax.

Also, commanders got together with their supervisors to set personal performance objectives (Q58) less frequently than did non-commanders. In this same general subject area, commanders received less feedback about their performance (Q59) and enjoyed a greater degree of job freedom (Q61)

than did non-commanders. The trend across all three of these variables could be the result of either geographic separation, and increased level of confidence in the ability of commanders on the part of their supervisors, or a combination of both.

Commanders were more positive about both the ability of their immediate supervisors and the quality of Air Force leadership, than were non-commanders. However, commanders had less confidence in the ability of Senior NCOs (Q76) than did non-commanders. Again, as in the previous category, some groups were more easily segregated than others.

Based on the number of groups in which they appeared, the following Leadership and Supervision issues seemed to be most important in segregating commanders and non-commanders:

Leadership/Supervision Satisfaction (all six groups)

Enforcement of enlisted supervisor/subordinate relationships (five groups)

Whether or not the Air Force is doing a good job of keeping its members informed (four groups)

Frequency of personal contact with supervisors (four groups)

Enforcement of respect for supervisors (two groups)

Quality of Air Force leadership (two groups)

Ability of immediate supervisor (two groups)

Frequency of job performance feedback from supervisors (two groups)

Ability of Senior NCOs (one group)

Job freedom (one group)

Standards and Enforcement

Colonels. The initial population consisted of 407 commanders and 780 non-commanders. Initial and final classifications are shown in Figure 17.

Initial Classification

Actual		CC	Non-CC	
	CC	34.3%	34.3%	I = 65.7%
	Non-CC	65.7%	65.7%	

Final Classification

Actual		CC	Non-CC	
	CC	57.1%	30.3%	K = 67.8%
	Non-CC	42.9%	69.7%	

Fig. 17. Standards and Enforcement: Colonels

Of the 47 predictors in the category, only six were necessary to attain the final value for K of 67.8% (significant at the .01 level). These variables, in order of importance, are as follows (question number in parentheses):

Discipline in today's Air Force (Q33)

Enforcement of mustache standards (E37)

Enforcement of unit mission accomplishment standards (E55)

Enforcement of enlisted supervisor/subordinate relationships (E54)

Enforcement of uniform wear standards (E35)

Enforcement of standards concerning Air Force life in general (E56)

The responses on every variable showed a clear pattern related to the commander status of the respondent. On the issue of unit mission accomplishment, commanders were more inclined to feel enforcement was about right than were non-commanders. Comparing the responses of colonels to the question of mission accomplishment revealed 82.3% of the commanders believed

enforcement was about right, whereas 74.8% of the non-commanders agreed. In fact, 20.8% of the non-commanders felt that enforcement of this issue was too lax; only 12% of the commanders agreed.

On every other issue, however, commanders perceived enforcement to be too lax. Among colonels, 31.2% of the commanders indicated discipline in today's Air Force (Q33) was too lenient; only 19.8% of the non-commanders also believed discipline was too lenient. On the issue of mustache standards (E37), 56.6% of the commanders versus 44.0% of the non-commanders indicated enforcement was too lax. To the question of uniform wear (E35), 67.9% of the commanders felt enforcement was too lax, while 56.6% of the non-commanders felt the same. Finally, on the subject of Air Force life in general (E56), 27.4% of the commanders stated enforcement was too lax, whereas 24.1% of the non-commanders held the same view.

Lieutenant Colonels. The initial group of 1744 lieutenant colonels consisted of 908 commanders and 836 non-commanders. Initial and final classifications are shown in Figure 18. The combination of responses

Initial Classification

		CC	Non-CC	
Actual	CC	52.1%	52.1%	I = 52.1%
	Non-CC	47.9%	47.9%	

Final Classification

		CC	Non-CC	
Actual	CC	63.5%	35.1%	K = 64.0%
	Non-CC	36.5%	64.9%	

Fig. 18. Standards and Enforcement: Lieutenant Colonels

across nine predictors was sufficient to achieve the final value for K of 64.0%. After the initial split on E54, it was possible to correctly classify 57.1% of the individuals (with a t-statistic of 4.170). The nine variables, in order of importance, are as follows (question number in parentheses):

Enforcement of enlisted supervisor/subordinate relationships (E54)

Enforcement of weight control standards (E40)

Enforcement of mustache standards (E37)

Enforcement of unit mission accomplishment standards (E55)

Enforcement of uniform standards (E35)

Enforcement of haircut standards (E36)

Haircut standards (S36)

Enforcement of military courtesy and customs standards (E39)

Enforcement of respect for supervisors (E45)

The issue of enlisted supervisor and subordinate relationships was discussed under the Leadership and Supervision category. On the subject of weight control standards (E40), commanders were more likely than non-commanders to believe enforcement was not too lax. Among lieutenant colonels, 63.2% of the commanders indicated enforcement was not too lax, while only 49.4% of the non-commanders agreed.

On the subject of hair, an interesting pattern of responses was noted. While 92.9% of the commanders and 92.5% of the non-commanders agreed that the haircut standards (S36) were not too lax, commanders were more likely (62.6%) than non-commanders (52.2%) to feel that enforcement of these standards (E36) was too lax. Enforcement of mustache standards

(E37) was also believed to be too lax by 48.3% of the commanders, while only 37.4% of the non-commanders agreed.

The question of unit mission accomplishment (E55) found 90.8% of the commanders indicating enforcement was not too lax, while 81.7% of the non-commanders agreed. Finally, on the issue of respect for supervisors (E45), 48.6% of the commanders believed enforcement to be too lax, whereas only 38.0% of the non-commanders held the same opinion.

Majors. The initial population of 1332 majors consisted of 628 commanders and 704 non-commanders. Initial and final classifications are shown in Figure 19. Only five variables were needed to obtain the final

Initial Classification

Actual	CC	Non-CC
CC	47.1%	47.1%
Non-CC	52.9%	52.9%

I = 52.9%

Final Classification

Actual	CC	Non-CC
CC	64.8%	33.3%
Non-CC	35.2%	66.7%

K = 65.8%

Fig. 19. Standards and Enforcement: Majors

value for K of 65.8%. After the initial population split on the issues of mustaches (E37) and weight control (E40 and S40), it was possible to correctly classify 61.9% of the individuals (with a t-statistic of 6.587). Subjects which segregated the commanders and non-commanders in this group

were hair (E37 and S36), weight control (E40 and S40), and enlisted supervisor and subordinate relationships (E54). In order of importance, the variables are as follows (question numbers in parentheses):

Enforcement of mustache standards (E37)

Enforcement of weight control standards (E40)

Weight control standards (S40)

Enforcement of enlisted supervisor/subordinate relationships (E54)

Haircut standards (S36)

The subject of enlisted supervisor and subordinate relationships was discussed under the Leadership and Supervision category. The response pattern on the question of haircuts (S36) suggests that by a small margin, commanders were more likely than non-commanders to believe that the standards were about right. A comparison of responses by majors showed that 58.7% of the commanders perceived the haircut standards to be about right, whereas 51.3% of the non-commanders held the same perception.

On the topic of mustache standards (E37) however, there was a strong indication that commanders were more likely than non-commanders to believe enforcement was too lax. A comparison of responses revealed that 55.4% of the commanders felt enforcement of mustache standards was too lax, while only 32.5% of the non-commanders felt the same.

The final area of disagreement between commanders and non-commanders was that of weight control. The data suggest that commanders not only perceive the standard (S40) to be too strict, but also, this is one area where they perceive enforcement not to be too lax. Put in other words, this is one subject area where non-commanders were more likely to perceive laxity

in both the standard and enforcement of the standard than were commanders. Comparison of responses by majors to the two questions (S40 and E40) revealed that 29.5% of the commanders, versus 14.3% of the non-commanders, felt the weight control standards were too strict; however, only 39.7% of the commanders believed enforcement was too lax, whereas 52.8% of the non-commanders indicated that enforcement was indeed too lax.

Captains. The initial population consisted of 467 commanders and 793 non-commanders. Initial and final classifications are shown in Figure 20. Only three variables were needed to obtain the final value for K of

Initial Classification

		CC	Non-CC	
Actual	CC	37.1%	37.1%	I = 62.9%
	Non-CC	62.9%	62.9%	

Final Classification

		CC	Non-CC	
Actual	CC	63.2%	28.1%	K = 69.7%
	Non-CC	36.8%	71.9%	

Fig. 20. Standards and Enforcement: Captains

69.7%. The entire population split on two of the variables (E36 and Q33), subsequently allowing 68.7% of the individuals to be correctly classified (with a t-statistic of 4.258). The three variables, in order of importance, are as follows (question number in parentheses):

Enforcement of haircut standards (E36)

Discipline in today's Air Force (Q33)

Enforcement of enlisted supervisor/subordinate relationship (E54)

The data suggest that among captains, strong disagreement exists between commanders and non-commanders on all three issues. In every instance, commanders were more apt to view the environment as being too lax. On the haircut issue (E36), 66.9% of the commanders indicated enforcement was too lax, while only 38.0% of the non-commanders believed this to be true. To the question of discipline in today's Air Force (Q33), 79.7% of the commanders believed it to be lenient, while only 55.1% of the non-commanders agreed. Finally, on the subject of enlisted supervisor and subordinate relationships (E54), 41.0% of the commanders perceived them to be too lax, whereas 21.7% of the non-commanders held the same perception.

First Lieutenants. The initial population of 686 first lieutenants consisted of 77 commanders and 609 non-commanders. The initial and final classifications are shown in Figure 21. Five predictors were sufficient to

Initial Classification

		CC	Non-CC
Actual	CC	11.2%	11.2%
	Non-CC	88.8%	88.8%

I = 88.8%

Final Classification

		CC	Non-CC
Actual	CC	54.2%	9.7%
	Non-CC	45.8%	90.3%

K = 89.1%

Fig. 21. Standards and Enforcement: First Lieutenants

achieve the final value for K of 89.1%; but, this is not significantly different from I. However, it should be noted that the ability to correctly classify commanders increased from 11.2% to 54.2%. The five predictors, in order of importance, are as follows (question number in parentheses):

Discipline in today's Air Force (Q33)

Weight control standards (S40)

Enforcement of enlisted supervisor/subordinate relationships (E54)

Mustache standards (S37)

Enforcement of drills and ceremonies standards (E44)

The issue of enlisted supervisor and subordinate relationships was discussed under the Leadership and Supervision category. On the other topics, the results again suggest strong differences between the perceptions of commanders and non-commanders. Among first lieutenants, 71.2% of the commanders felt discipline in today's Air Force (Q33) was lenient, while only 37.1% of the non-commanders felt the same. Enforcement of drills and ceremonies standards (E44) was also judged to be too lax by 39.8% of the commanders, whereas only 19.0% of the non-commanders held the same perception. To the question of mustache standards (S37) however, 64.6% of the non-commanders felt the standards were too strict, whereas 51.1% of the commanders believed the standards to be too strict.

Second Lieutenants. The initial population consisted of 29 commanders and 538 non-commanders. Since it was impossible to isolate any final group containing a majority of commanders, it was also impossible to improve upon the initial classification shown in Figure 22.

		Initial Classification	
		CC	Non-CC
Actual	CC	5.1%	5.1%
	Non-CC	94.9%	94.9%

I = 94.9%

Fig. 22. Standards and Enforcement: Second Lieutenants

Summary. A clear pattern emerged on the subject of Standards and Enforcement. With the exception of two issues, the data suggest that commanders were more likely than non-commanders to perceive the enforcement of Air Force standards as being too lax. Subsequent comparison of responses to the various questions supported this hypothesis. The question of discipline in today's Air Force was perhaps the best cue to these results, as the percentage of commanders who believed discipline was too lenient was nearly twice the percentage of non-commanders who felt the same.

The two issues where commanders were less likely than non-commanders to perceive laxity were weight control and unit mission accomplishment. On the issue of weight control, commanders were more inclined to believe the standards were too strict than were non-commanders. However, non-commanders were more apt to feel enforcement of weight control standards was too lax. As to the issue of unit mission accomplishment, it seems reasonable to assume that a commander would be more likely to perceive that his/her exercise of authority was about right, than would a non-commander. The data appears to reflect this hypothesis.

Another rather interesting observation was that the more senior the group under study, the less likely it was that a standard would become an

issue of disagreement between commanders and non-commanders. However, there seems no evidence which would suggest an explanation of this phenomenon.

Based on the number of groups in which they appeared, the following Standards and Enforcement issues seemed most important in segregating commanders and non-commanders:

Enlisted supervisor/subordinate relationships (five groups)

Weight control (four groups)

Mustaches (four groups)

Haircuts (four groups)

Discipline in today's Air Force (four groups)

Unit mission accomplishment (two groups)

Wear of uniform (two groups)

Respect for supervisors (two groups)

Air Force life in general (one group)

Military courtesy and customs (one group)

Drills and ceremonies (one group)

Work

Colonels. The initial population of 1171 colonels consisted of 381 commanders and 790 non-commanders. Initial and final classifications are shown in Figure 23. Seven of the original twenty-four predictors were necessary to achieve the final value for K of 70.7%. These seven variables, in order of importance, are as follows (question number in parentheses):

Military vis-a-vis Civilian Pay (Q11)

Hoppock Job Satisfaction Score (Q80)

How often to you and your supervisor get together to set your personal performance objectives? (Q58)

How well do you like your job? (Q20)

Work Satisfaction (Q18)

How do you compare with others (attitude toward job)? (Q22)

What is your estimate of the average number of hours per week you spend on the job? (Q27)

Initial Classification

		CC	Non-CC	
Actual	CC	32.5%	32.5%	I = 67.5%
	Non-CC	67.5%	67.5%	

Final Classification

		CC	Non-CC	
Actual	CC	57.8%	25.9%	K = 70.7%
	Non-CC	42.2%	74.1%	

Fig. 23. Work: Colonels

Only two variables (Q58 and Q27) had response patterns which seemed clearly related to the commander status of the respondent. The responses by colonels to question 58 were discussed under the Leadership and Supervision category. On the issue of hours per week on the job (Q27), the data suggest that commanders were more likely than non-commanders to work over 50 hours per week. Comparison of responses showed that 69.4% of the commanders worked over 50 hours per week, whereas 55.3% of the non-commanders spent as much time on the job.

Lieutenant Colonels. The initial population of 1700 lieutenant colonels consisted of 838 commanders and 862 non-commanders. The initial and final classifications are shown in Figure 24. Four variables were

Initial Classification

		CC	Non-CC	
Actual	CC	49.3%	49.3%	I = 50.7%
	Non-CC	50.7%	50.7%	

Final Classification

		CC	Non-CC	
Actual	CC	72.8%	27.3%	K = 72.8%
	Non-CC	27.2%	72.7%	

Fig. 24. Work: Lieutenant Colonels

sufficient to attain the final value for K of 72.8%. The entire population split on two variables, Q27 and Q24. After initial split on the question of hours per week (Q27), it was possible to correctly classify 67.7% of the population (with a t-statistic of 14.020). The second split, on the question of preparation for greater responsibility (Q24), increased the ability to correctly classify the population to 68.1% (with a t-statistic of 14.311). The four variables, in order of importance, are as follows (question number in parentheses):

> What is your estimate of the average number of hours per week you spend on the job? (Q27)
>
> Do you think your present job is preparing you to assume future positions of greater responsibility? (Q24)

How do you feel about changing jobs? (Q21)

Hoppock Job Satisfaction Score (Q80)

The responses to the question of hours per week on the job (Q27) displayed a pattern similar to that for colonels. The data suggest that commanders were much more likely than non-commanders to spend more than 50 hours per week on the job. Among lieutenant colonels, 73.9% of the commanders spent in excess of 50 hours per week on the job, while only 38.5% of the non-commanders devoted as much time to the job.

On the issue of future responsibility (Q24) the response pattern suggests that commanders were much more likely to feel that they were being prepared for increased responsibility than were non-commanders. Comparison of responses by lieutenant colonels revealed that 60.5% of the commanders stated that their present job was definitely preparing them for greater responsibility, whereas only 27.1% of the non-commanders felt the same. On the issue of changing jobs (Q21), the data implied that commanders were less willing to change jobs than were non-commanders. Responses to question 21 show that 77.3% of the commanders would change jobs only if they could get a better one, whereas only 58.5% of the non-commanders would hold out for a better job before leaving their present one.

Majors. The initial population of 1324 majors consisted of 589 commanders and 735 non-commanders. Initial and final classifications are shown in Figure 25. Six predictors were necessary to achieve the final value of K of 71.5%. However, after the initial split on the first variable (Q23), it was possible to correctly classify 68.4% of the members (with a t-statistic of 9.457). The six predictor variables, in order of importance, are as follows (question number in parentheses):

Degree of job challenge (Q23)

Do you think your present job is preparing you to assume future positions of greater responsibility? (Q24)

How do you compare with others (attitude toward job)? (Q22)

How often do you and your supervisor get together to set your personal performance objectives? (Q58)

For your next assignment do you want a job that has greater responsibility than your present job? (Q25)

What is your estimate of the average number of hours per week you spend on the job? (Q27)

Initial Classification

Actual	CC	Non-CC	
CC	44.5%	44.5%	I = 55.5%
Non-CC	55.5%	55.5%	

Final Classification

Actual	CC	Non-CC	
CC	66.8%	24.4%	K = 71.5%
Non-CC	33.2%	75.6%	

Fig. 25. Work: Majors

The responses across the six variables displayed a pattern which appeared directly related to the commander status of the respondent. The responses to the job challenge question (Q23) indicated that commanders were more likely to find their jobs very challenging than were non-commanders. Among majors, 50.8% of the commanders found their jobs very challenging, while only 17.2% of the non-commanders felt the same.

The data also suggest commanders are more inclined than non-commanders to believe that their jobs are preparing them for increased responsibility in the future. A total of 90.1% of the commanders indicated a belief that they were being prepared for greater responsibility, while only 59.3% of the non-commanders held the same opinion. However, when asked if they wanted greater responsibility in their next assignment (Q25), non-commanders were more likely than commanders to say yes. The responses indicated that 70.9% of the non-commanders desired more responsibility in their next assignment, while 56.9% of the commanders expressed the same desire. As far as their current jobs (Q22), commanders were apt to feel more positive about them than were non-commanders. Comparison of responses showed that among majors, 40.7% of the commanders perceived that they liked their jobs much better than most people, while only 19.5% of the non-commanders felt the same. On the question of hours per week on the job (Q27), the pattern appeared to be the same as for colonels and lieutenant colonels, with 63.1% of the commanders exceeding 50 hours per week on the job, whereas only 36.5% of the non-commanders spent as many hours at work.

Finally, on the question of contact with supervisors (Q58), the data implies the same trend as for other groups; commanders are less likely than non-commanders to have frequent contact with their supervisors. A comparison of the responses by majors to question 58 showed that 80.0% of the commanders seldom if ever met with their supervisors, while 76.4% of the non-commanders experienced the same level of contact with their supervisors.

Captains. The initial population of 1257 captains consisted of 433 commanders and 824 non-commanders. The initial and final classifications

are shown in Figure 26. Only three variables were necessary to attain the final value for K of 73.9%. However, after the first split of the population on Q24, it was possible to correctly classify 72.3% of the members

Initial Classification

Actual	CC	Non-CC
CC	34.4%	34.4%
Non-CC	65.6%	65.6%

I = 65.6%

Final Classification

Actual	CC	Non-CC
CC	67.0%	23.8%
Non-CC	33.0%	76.2%

K = 73.9%

Fig. 26. Work: Captains

(with a t-statistic of 5.045). The three variables, in order of importance, are as follows (question number in parentheses):

> Do you think your present job is preparing you to assume future positions of greater responsibility? (Q24)
>
> How often do you and your supervisor get together to set your personal performance objectives? (Q58)
>
> Hoppock Job Satisfaction Score (Q80)

There was a clear response pattern on the subject of preparation for future responsibility (Q24). The results strongly suggest that among captains, commanders are much more likely than non-commanders to feel they are being prepared for increased responsibility in the future. Looking at the responses by captains showed that 60.8% of the commanders stated

definitely yes when answering question 24, while only 21.2% of the non-commanders felt the same.

On the subject of supervisor contact (Q58), the responses were less clear, but implied that commanders were less likely to have contact with their supervisors than were non-commanders. While 27.5% of the non-commanders seldom met with their supervisors, 39.3% of the commanders experienced the same infrequent contact with their supervisors. This is consistent with the previous results.

First Lieutenants. The initial population of 704 first lieutenants consisted of 74 commanders and 630 non-commanders. The initial and final classifications are shown in Figure 27.

Initial Classification

Actual	CC	Non-CC
CC	10.5%	10.5%
Non-CC	89.5%	89.5%

I = 89.5%

Final Classification

Actual	CC	Non-CC
CC	61.4%	7.1%
Non-CC	38.6%	92.9%

K = 90.9%

Fig. 27. Work: First Lieutenants

Only four variables were necessary to achieve the final value for K of 90.9% (significant at the 0.11 level). These variables, in order of importance, are as follows (question number in parentheses):

Do you feel that the work you are now doing is appropriate to the grade you hold? (Q26)

Do you think your present job is preparing you to assume future positions of greater responsibility? (Q24)

Hoppock Job Satisfaction Score (Q80)

How often do you and your supervisor get together to set your personal performance objectives? (Q58)

The two issues pertaining to present job (Q26 and Q24) appeared to be the area of greatest disagreement between first lieutenant commanders and non-commanders. The data suggest that commanders were much more likely than non-commanders to perceive their grade was too low for their job; but, that their job was definitely preparing them for future increased responsibility. Comparison of responses revealed that 73.6% of the first lieutenant commanders felt their grade was too low, while only 22.5% of the non-commanders felt the same. On the issue of preparation for future responsibility (Q24), 63.1% of the commanders felt that they were definitely being prepared for increased responsibility, while only 22.2% of the non-commanders held the same opinion.

Finally, on the issue of supervisor contact (Q58), commanders were more likely than non-commanders to seldom get together with their supervisors. For first lieutenants, 39.1% of the commanders seldom met with their supervisors, while only 27.8% of the non-commanders indicated that they seldom met with their supervisors.

Second Lieutenants. The initial population of 575 second lieutenants consisted of 29 commanders and 546 non-commanders. The initial and final classifications are shown in Figure 28.

Initial Classification

Actual		CC	Non-CC	
	CC	5.0%	5.0%	I = 95.0%
	Non-CC	95.0%	95.0%	

Final Classification

Actual		CC	Non-CC	
	CC	68.8%	3.2%	K = 96.0%
	Non-CC	31.2%	96.8%	

Fig. 28. Work: Second Lieutenants

This was the first category wherein it was possible to isolate a final "commanders' group" among second lieutenants. Four predictors were sufficient to achieve the final value for K of 96.0% (significant at the 0.13 level). While the value of K is not much greater than the value of I, it should be noted that the ability to correctly classify commanders increased by a factor greater than 13 (i.e., from 5.0% to 68.8%). The four variables in order of importance, are as follows (question number in parentheses):

Do you feel that the work you are now doing is appropriate to the grade you hold? (Q26)

Hoppock Job Satisfaction Score (Q80)

Military vis-a-vis Civilian Pay (Q11)

How often do you and your supervisor get together to set your personal performance objectives? (Q58)

The response patterns on these variables suggest that among second lieutenants, commanders are much more likely than non-commanders to perceive that their grade is too low (Q26); to feel their pay is too low (Q11); and, to have frequent contact with their supervisors (Q58). On the subject of grade, 83.3% of the second lieutenant commanders felt their grade was too low, while only 21.2% of the non-commanders felt the same. As to how their military compensation compared with civilian pay for similar work, 79.3% of the commanders believed their compensation was somewhat lower, whereas 45.3% of the non-commanders held the same perception. Finally, on the issue of supervisor contact, this group displayed a response pattern just the opposite of the other groups. Among second lieutenants, 45.2% of the commanders indicated frequent contact with their supervisors, while only 24.3% of the non-commanders expressed the same degree of contact with their supervisors.

Summary. In this category, response patterns were not as clearly defined as in the previous three categories. The predictor which occurred in almost every group, the Hoppock Job Satisfaction Score, never had a clear pattern of responses associated with it. Perhaps the fact that the Hoppock score is a composite of four other variables made the pattern too complex to be easily interpreted. In reviewing the response pattern for each group across the Hoppock variables, it appears that the commanders were more likely than non-commanders to have a high (20 or greater) job satisfaction score. Comparing the scores for commanders and non-commanders showed that 72.5% of the commanders had job satisfaction scores greater than or equal to 20, while only 52.4% of the non-commanders had similar scores.

With the exception of second lieutenants, commanders seldom had personal contact with their supervisors. Commanders also tended to spend more than 50 hours per week on the job, but felt their job was challenging and preparing them for increased responsibility. Commanders liked their jobs much more than did non-commanders, even though they were more likely to feel that higher monetary rewards could be gained in civilian life for similar work.

Based on the number of groups in which they appeared, the following Work issues seemed most important in segregating commanders from non-commanders:

Hoppock Job Satisfaction Score (five groups)

Frequency of personal contact with supervisors (five groups)

Preparation for greater responsibility (four groups)

Hours per week on the job (three groups)

Comparison of job attitude with others (two groups)

Military vis-a-vis Civilian Pay (two groups)

Appropriateness of grade (two groups)

Degree of job challenge (one group)

Work Satisfaction (one group)

Degree of like or dislike of job (one group)

Desire for increased responsibility (one group)

Final Results

These results were obtained by combining all of the predictor variables previously identified in each category, and once again using the methodology described in Chapter III to analyze each group of Air Force officers.

Colonels. The initial population of 1189 colonels consisted of 392 commanders and 797 non-commanders. The initial and final classifications are shown in Figure 29. The responses across five variables were sufficient

Initial Classification

		CC	Non-CC	
Actual	CC	33.0%	33.0%	I = 67.0%
	Non-CC	67.0%	67.0%	

Final Classification

		CC	Non-CC	
Actual	CC	62.9%	27.8%	K = 70.8%
	Non-CC	37.1%	72.2%	

Fig. 29. Final Results: Colonels

to attain the final correct classification of 70.8% of the population. Listed below, in order of importance, are these variables (question number in parentheses):

Leadership/Supervision Satisfaction (Q30)

How often do you and your supervisor get together to set your personal performance objectives? (Q58)

Military vis-a-vis Civilian Pay (Q11)

Free Time Satisfaction (Q16)

What is your estimate of the average number of hours per week you spend on the job? (Q27)

With this set of predictors, the response patterns seemed clearly defined and related to the commander status of the respondent.

On the issue of leadership and supervision, and free time, the data indicate that commanders were more likely to be satisfied with these aspects of their lives than were non-commanders. Comparison of responses showed that among colonels, 79.2% of the commanders were satisfied with the leadership and supervision facet of their lives, while only 64.6% of the non-commanders were satisfied. Looking at the free time subject revealed that 53.1% of the commanders were satisfied with this aspect of their lives, whereas 45.1% of the non-commanders registered satisfaction with this issue.

The data also suggested that commanders and their supervisors were less likely to get together than were non-commanders and their supervisors. Among colonels, 56.4% of the commanders seldom or never met with their supervisors, whereas 43.1% of the non-commanders experienced the same infrequent contact with their supervisors.

Finally, the response pattern suggests that commanders are more likely than non-commanders to spend over 55 hours per week on the job; and, feel they would be better paid in civilian life. For this group, 48.4% of the commanders indicated they exceed 55 hours per week on the job, while only 36.0% of the non-commanders spent as much time on the job. Also, 34.8% of the commanders felt their military compensation was far below civilian pay for similar work, while only 22.2% of the non-commanders held the same perception.

Lieutenant Colonels. The initial population of 1792 lieutenant colonels consisted of 930 commanders and 862 non-commanders. The initial and final classifications are shown in Figure 30. Only four variables were necessary to achieve the final correct classification of 71.3% of the population. After the first split, on the issue of hours per week spent on

Initial Classification

Actual		CC	Non-CC
	CC	51.9%	51.9%
	Non-CC	48.1%	48.1%

I = 51.9%

Final Classification

Actual		CC	Non-CC
	CC	69.0%	25.1%
	Non-CC	31.0%	74.9%

K = 71.3%

Fig. 30. Final Results: Lieutenant Colonels

the job, it was possible to correctly classify 67.7% of the population (with a t-statistic of 13.380). All four variables, in order of importance, are as follows (question number in parentheses):

What is your estimate of the average number of hours per week you spend on the job? (Q27)

Do you think your present job is preparing you to assume future positions of greater responsibility? (Q24)

Economic Security Satisfaction (Q10)

Hoppock Job Satisfaction Score (Q80)

The results of the analysis suggest that among lieutenant colonels, commanders were more likely than non-commanders to spend over 50 hours per week on the job; to feel that they were being prepared for increased responsibility; and, to be satisfied with the economic security and job aspects of their lives.

Comparison of responses showed that 73.9% of the commanders exceeded 50 hours per week on the job, while only 38.5% of the non-commanders spent

as much time on the job. On the issue of preparation for greater responsibility, 60.5% of the commanders believed that their present job was definitely preparing them for increased responsibility in future assignments, whereas only 27.1% of the non-commanders held the same perception. To the question of economic security, 52.4% of the commanders expressed high satisfaction with this aspect of their lives, while only 35.0% of the non-commanders indicated the same level of satisfaction. Finally, 79.2% of the lieutenant colonel commanders had Hoppock scores greater than or equal to 20, compared to only 55.6% of the non-commanders with similar scores.

Majors. The initial population of 1324 majors consisted of 587 commanders and 737 non-commanders. The initial and final classifications are shown in Figure 31. A total of eight variables were necessary to obtain

Initial Classification

		CC	Non-CC	
Actual	CC	44.3%	44.3%	I = 55.7%
	Non-CC	55.7%	55.7%	

Final Classification

		CC	Non-CC	
Actual	CC	71.1%	25.2%	K = 73.3%
	Non-CC	28.9%	74.8%	

Fig. 31. Final Results: Majors

the correct classification of 73.3% of the population. After the initial split, on the issue of job challenge, it was possible to correctly classify

68.5% of the population (with a t-statistic of 9.405). The eight variables, in order of importance, are as follows (question number in parentheses):

How do you evaluate your present Air Force job? (Q23)

Do you think your present job is preparing you to assume future positions of greater responsibility? (Q24)

Enlisted supervisor/subordinate relationships (E54)

Fringe Benefit Information (Q12)

The Air Force is doing a good job of keeping me informed about what is going on. (Q57)

What is your estimate of the average number of hours per week you spend on the job? (Q57)

Military vis-a-vis Civilian Pay (Q11)

Leadership/Supervision Satisfaction (Q30)

In this group, as in the Colonels' group, the response patterns are clearly defined and seem directly related to the commander status of the respondent. The variables seem to address three general subject areas: job (Q11, Q23, Q24, and Q27), information flow (Q12 and Q57), and supervision (Q30 and E54).

The data suggest that commanders were more likely than non-commanders to feel their jobs were not only very challenging, but also that their jobs were preparing them for greater responsibility. Among majors, 50.8% of the commanders felt their jobs were very challenging, while only 17.2% of the non-commanders felt the same. Additionally, 90.1% of the commanders believed that their jobs were preparing them for greater responsibility, whereas 59.3% of the non-commanders held the same belief. Again on the topic of job related issues, it appeared that commanders were more apt than non-commanders to spend over 50 hours per week on the job, and feel underpaid by civilian

standards. While 63.1% of the commanders spent more than 50 hours per week on the job, only 36.5% of the non-commanders spent as much time on the job. Among majors, 81.3% of the commanders felt that military compensation was lower than civilian pay for similar work, but only 67.8% of the non-commanders felt the same.

On the subject of fringe benefit information, 46.9% of the commanders agreed that the Air Force was providing enough information to its members, while only 29.3% of the non-commanders agreed. Again on the subject of information, 78.0% of the commanders agreed that the Air Force was doing a good job of keeping them informed about what was going on, however, only 48.0% of the non-commanders held the same opinion. The trend appears very clear to the author: commanders were getting the word, but non-commanders were not.

Finally, on the supervision issue, commanders were more likely to perceive a high degree of satisfaction with leadership and supervision than were non-commanders. Comparison of responses revealed that 56.1% of the commanders felt high satisfaction with the leadership and supervision aspects of their lives, while only 31.2% of the non-commanders felt the same. Also, more commanders than non-commanders perceived laxity in enlisted supervisor and subordinate relationships. Among majors, 42.5% of the commanders believed enlisted supervisor and subordinate relationships to be too lax, whereas only 23.6% of the non-commanders had the same opinion.

Captains. The initial population of 1266 captains consisted of 436 commanders and 830 non-commanders. The initial and final classifications are shown in Figure 32. Six variables were sufficient to attain the correct classification of 77.3% of the population. The entire population split on two of the variables, Q24 and Q57. After the split on Q24, it was possible

Initial Classification

Actual		CC	Non-CC	
	CC	34.4%	34.4%	I = 65.6%
	Non-CC	65.6%	65.6%	

Final Classification

Actual		CC	Non-CC	
	CC	73.7%	21.5%	K = 77.3%
	Non-CC	26.3%	78.5%	

Fig. 32. Final Results: Captains

to properly classify 72.3% of the population (with a t-statistic of 5.028). After the second split, on Q57, it was possible to classify 75.3% of the population correctly (with a t-statistic of 7.275). All six variables, in order of importance, are as follows (question number in parentheses):

> Do you think your present job is preparing you to assume future positions of greater responsibility? (Q24)
>
> The Air Force is doing a good job of keeping me informed about what is going on. (Q57)
>
> Discipline in today's Air Force (Q33)
>
> How often do you and your supervisor get together to set your personal performance objectives? (Q58)
>
> Hoppock Job Satisfaction Score (Q80)
>
> Respect for supervisors (E45)

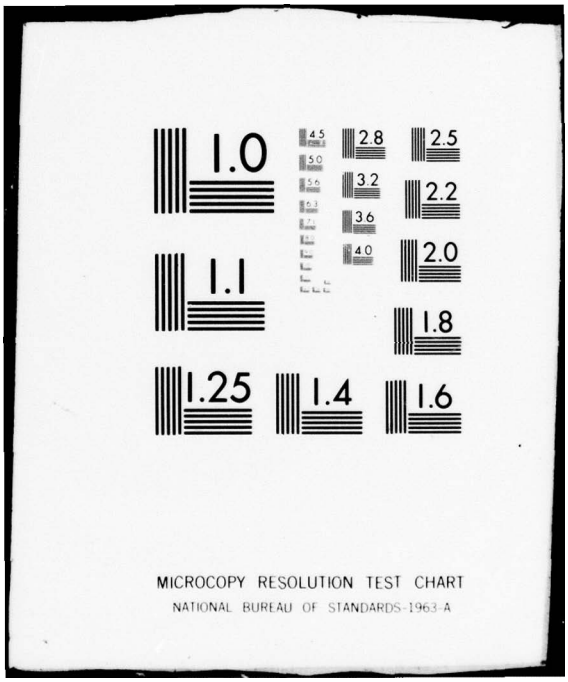
On the issue of preparation for increased responsibility, the responses for captains clearly parallel those of majors and lieutenant colonels.

AD-A065 917 AIR FORCE INST OF TECH WRIGHT-PATTERSON AFB OHIO SCH--ETC F/G 5/10
AN INVESTIGATION OF ATTITUDINAL DIFFERENCES BETWEEN COMMANDERS --ETC(U)
SEP 78 S RUDD

UNCLASSIFIED AFIT/GSM/SM/78S-18 NL

2 OF 2
AD A065917

END
DATE FILMED
5-79
DDC


1.0
1.1
1.25
1.4
1.6
1.8
2.0
2.2
2.5
2.8
3.2
3.6
4.0
4.5
5.0
5.6
6.3
MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

Again, commanders were much more likely than non-commanders to feel that their jobs were preparing them for greater responsibility. While 60.8% of the commanders indicated that their jobs were definitely preparing them for positions of greater responsibility, only 21.2% of the non-commanders were of the same opinion.

The question of information flow found 72.3% of the commanders agreeing that the Air Force did a good job of keeping them informed, whereas only 36.6% of the non-commanders felt the same. Obviously some members were being kept informed while others were not. On the question of contact with supervisor, commanders were more likely than non-commanders to seldom meet with their supervisors. Among captains, 39.3% of the commanders stated that they seldom met with their supervisors, while 27.5% of the non-commanders gave the same response.

On the questions of discipline and respect for supervisors, commanders were more inclined than non-commanders to perceive enforcement of both as being too lenient. Comparing responses revealed that 36.2% of the commanders believed discipline to be too lenient, whereas only 14.3% of the non-commanders agreed with that opinion. While 59.1% of the commanders stated that enforcement of respect for supervisors was too lax, only 36.1% of the non-commanders felt the same.

Finally, although the pattern was not entirely clear, the data suggest that among captains, commanders have a higher Hoppock score than non-commanders. Comparison of the Hoppock scores revealed that 61.6% of the commanders had scores greater than or equal to 20, while only 46.4% of the non-commanders had similar scores.

First Lieutenants. The initial population of 708 first lieutenants consisted of 80 commanders and 628 non-commanders. The initial and final classifications are shown in Figure 33. Five variables were used to attain

Initial Classification

Actual		CC	Non-CC	
	CC	11.3%	11.3%	I = 88.7%
	Non-CC	88.7%	88.7%	

Final Classification

Actual		CC	Non-CC	
	CC	78.7%	6.5%	K = 92.5%
	Non-CC	21.3%	93.5%	

Fig. 33. Final Results: First Lieutenants

the correct classification of 92.5% of the population. These five predictors, in order of importance, are as follows (question number in parentheses):

> Do you feel that the work you are now doing is appropriate to the grade you hold? (Q26)
>
> The Air Force is doing a good job of keeping me informed about what is going on. (Q57)
>
> Enforcement of drills and ceremonies standards (E44)
>
> How often do you and your supervisor get together to set your personal performance objectives? (Q58)
>
> Hoppock Job Satisfaction Score (Q80)

There was a clear response pattern on only three of the variables. On the basis of the responses, it appeared that among first lieutenants, commanders were more likely than non-commanders to feel that their grade

was too low; that the Air Force was doing a good job of keeping them informed; and, that enforcement of standards was too lax.

Comparison of responses of first lieutenants revealed that 73.6% of the commanders felt their grade was too low, while only 22.5% of the non-commanders felt the same. Again, 71.2% of the commanders agreed that the Air Force was doing a good job of keeping them informed, whereas only 37.1% of the non-commanders had the same opinion. Finally, on the issue of drills and ceremonies, 39.8% of the commanders believed that enforcement of drills and ceremonies standards was too lax, while 19.0% of the non-commanders agreed.

Second Lieutenants. The initial population of 554 second lieutenants consisted of 28 commanders and 526 non-commanders. The initial and final classifications are shown in Figure 34. While it was possible to identify

Initial Classification

		CC	Non-CC	
Actual	CC	5.1%	5.1%	I = 94.9%
	Non-CC	94.9%	94.9%	

Final Classification

		CC	Non-CC	
Actual	CC	50.0%	3.2%	K = 94.9%
	Non-CC	50.0%	96.8%	

Fig. 34. Final Results: Second Lieutenants

a final group as a "commanders' group", the final value of K (94.9%) is the same as I. It should be noted however, that the ability to correctly

classify commanders improved from 5.1% to 50.0%. Only two variables were necessary to isolate a commanders' group, Q26 and Q63. These variables are as follows (question number in parentheses):

> Do you feel that the work you are now doing is appropriate to the grade you hold? (Q26)
>
> Equity Satisfaction (Q63)

The responses to these two variables suggest that among second lieutenants, commanders were more inclined than non-commanders to feel their grade was too low; and, to feel a high degree of satisfaction with the equity aspect of their lives. Comparison of responses revealed that 83.3% of the commanders felt that their grade was too low, while only 21.2% of the non-commanders felt the same. Also, 53.4% of the commanders indicated a high degree of satisfaction with the equity aspect of their lives, whereas only 20.7% of the non-commanders enjoyed the same level of satisfaction.

Summary

In this chapter the results of the data analysis for each grade within the four categories of predictor variables have been presented. In many instances definite trends in response patterns were noted and commented upon. The variables from each category were combined and used in a final analysis for each grade. When all the variables from each category were combined, some of the predictors which had been relatively important in each category became relatively "unimportant" in the final analysis.

Based upon the number of groups in which they appeared, the following issues seemed most important in segregating commanders from non-commanders:

> Frequency of contact with supervisor (three groups)
>
> Hoppock Job Satisfaction Score (three groups)

Hours per week spent on the job (three groups)

Preparation for greater responsibility (three groups)

Information flow (three groups)

Leadership/Supervision Satisfaction (two groups)

Military vis-a-vis Civilian Pay (two groups)

Appropriateness of grade (two groups)

Free Time Satisfaction (one group)

Equity Satisfaction (one group)

Discipline (one group)

Enlisted supervisor/subordinate relationships (one group)

Economic Security Satisfaction (one group)

Respect for supervisors (one group)

Degree of job challenge (one group)

Fringe benefit information (one group)

Drills and ceremonies (one group)

V. Summary, Conclusions and Recommendations

The starting point for this project was the question of whether or not significant differences in attitudes and perceptions regarding Air Force life exists between Air Force commanders and non-commanders. Earlier research by Eshbaugh (1977) and Manley and his associates (1977) had identified differences between the responses of commanders and other Air Force officers to several identical questions which appeared on two different surveys. The Air Force commanders had been surveyed in December 1976 (Commanders' Survey); the other Air Force officers in May and June of 1975 (AFMIG Survey). Thus, there was a question of whether the differences in responses were due to a general shift in attitudes over the 18 month interim, or some other factor(s).

A survey of Air Force members in April of 1977 (QOL-II) provided a contemporary set of responses from officers to compare with the Commanders' Survey responses. The QOL-II survey contained 75 questions which were identical to those answered by the commanders only four months earlier. The first step in attempting to identify the existence of differences between commanders and non-commanders was the creation of a data base containing the responses from both survey populations. Next, a procedure was developed which would segregate commanders and non-commanders on the basis of differences in responses to the various questions.

In an attempt to isolate the cause of any differences to one of organizational position (i.e., being a commander or non-commander), the respondents were grouped according to grade. It was believed that by grouping the population according to grade before beginning the actual analysis, the

influence of difference in demographics (e.g., pay, age, time in service) on the response patterns of those under study could be significantly reduced, if not totally eliminated.

Employing the procedure developed for this project, an analysis of each group of officers demonstrated that commanders and non-commanders could be segregated on the basis of differences in responses to identical questions. Some of these differences were perceptual and attitudinal, while others were not. In sum, the differences between the responses of commanders and non-commanders identified in the works of Eshbaugh and Manley, et al., appear to be the result of organizational position, and not a change in attitudes over time.

Conclusions

Significant differences exist between commanders and non-commanders which are attributable to organizational position. Based upon this research effort, the issues on which commanders and non-commanders differ most are:

Frequency of personal contact with supervisor

Hoppock Job Satisfaction Score

Hours per week spent on the job

Preparation for greater responsibility (job growth)

Information flow

Leadership/Supervision satisfaction

Military vis-a-vis civilian pay

Appropriateness of grade

Free time satisfaction

Equity satisfaction

Discipline

Enlisted supervisor/subordinate relationships

Economic security satisfaction

Respect for supervisors

Degree of job challenge

Fringe benefit information

Drills and ceremonies

The differences between commanders and non-commanders on two issues cannot be categorized as attitudinal or perceptual in nature. The frequency with which commanders and their supervisors get together to set personal performance objectives, and the number of hours per week a commander spends on the job are facts rather than perceptions.

The frequency with which commanders and their supervisors get together was also discussed in the earlier work by Manley and his associates. However, the findings of this effort contradict those presented in the earlier work. The data gathered in this project lead one to conclude that commanders and their supervisors meet with less frequency than do non-commanders and their supervisors. This seems logical since many commanders are geographically separated from their supervisors. Also, one would assume that an individual selected to command an organization would also be expected to set his/her own performance objectives within the framework of the unit mission requirements.

The differences between commanders and non-commanders on the remaining issues could be identified as attitudinal or perceptual in nature. On the subject of information flow, a majority (61.0%) of the commanders perceived that the Air Force was not only providing enough information about

fringe benefits, but was also doing a good job of keeping them informed about what was going on. However, a majority (59.3%) of the non-commanders disagreed with the commanders on both issues. This difference between commanders and non-commanders was also identified by Manley and his associates (1977). Comparing the data presented by Manley, et al., with the results of this study revealed that there had been no change in the response patterns of the two non-commander groups (i.e., the AFMIG (1975) officers and the QOL-II (1977) officers). This leads to the conclusion that either this issue has not received enough attention in the past, or that the information being provided to commanders is intentionally not being passed on to those who are not in command. Whatever the cause, this is an area where improvement is needed.

The subject of discipline was also identified in the Technical Report by Manley, et al. (1977) as an area where commanders and non-commanders differed in their opinions. Commanders believed discipline to be too lenient. Comparing the results presented in the Technical Report with those obtained in this study shows that the response patterns of the two non-commanders' groups (i.e., AFMIG (1975) officers and QOL-II (1977) officers) are identical. Thus, the differences in the expressed opinions of commanders and non-commanders are due to perceptual differences which exist between the two groups rather than a change in attitudes over time.

In addition to the general subject of discipline, three other "disciplinary" issues were identified in this study as items on which commanders and non-commanders held significantly different views. On the questions of enlisted supervisor and subordinate relationships, respect for supervisors, and drill and ceremonies, commanders believed that enforcement of the standards was too lax. Whether they were looking internal

to their organization or external to other organizations is unknown (and really does not matter); however, the general consensus among commanders appears to be that Air Force standards are not being enforced. These results are difficult to understand, since in the opinion of this writer, commanders are in the best position to insure proper enforcement of standards and discipline. It would appear that while the majority of commanders agree that discipline and enforcement of standards are too lax, this same majority has taken no action to correct these perceived deficiencies.

On the Quality of Life issues of Leadership and Supervision, Equity, and Economic Security, commanders expressed a higher level of satisfaction than did non-commanders. For some officer groups (i.e., colonels and lieutenant colonels) Free Time satisfaction was also an issue on which commanders and non-commanders held different opinions. In essence, the results of this study duplicate the findings of Manley et al. (1977), as well as those of Eshbaugh (1977). Overall, commanders were more likely than non-commanders to be highly satisfied with the quality of Air Force life. As stated previously, it appears that being a commander provides an individual with a perception of satisfaction which permeates the entire spectrum of quality of life issues.

Two job related issues identified by Thompson (1975) and Eshbaugh (1977) as important predictors of job satisfaction among Air Force members were the perceptions of job challenge and job growth. On both of these issues commanders were more positive in their expressed opinions than were non-commanders. More than half (51.9%) of the commanders believed that their jobs were not only very challenging, but also that the jobs were

definitely preparing them for future positions of greater responsibility. However, less than one-fourth (24.6%) of the non-commanders held the same perceptions of their jobs. Thus, it was not surprising to find that the Hoppock Job Satisfaction scores were higher for commanders than for non-commanders (20.82 vs. 18.96).

The other issues which were important in segregating commanders and non-commanders were those of military compensation versus civilian pay, and appropriateness of grade. Commanders perceived that their military compensation was below what they would be paid for similar work in the civilian sector. The lower the grade of the commander, the more likely this perception would prevail. It seems logical for an individual to believe that the financial rewards associated with a position of responsibility and authority, such as that of a commander, would be greater in a civilian organization than in the military. It is generally held that one's pay in the civilian sector is commensurate with one's position and duties; in the military however, one's compensation is based upon grade and longevity rather than level of assignment or duties.

The final issue, appropriateness of grade, was most significant in segregating commanders and non-commanders among the lieutenant ranks. There are some instances where a junior officer would find his/her grade too low for the duties normally associated with a commander (e.g., final endorsing official on Senior NCO APRs). Additionally, an organization with a lieutenant as a commander is often in a relatively powerless position when vying with other organizations for limited resources. Thus it seems that differences on this issue may be based on both facts and perceptions.

An integral part of the original plan for this study was to attempt to identify those issues where significant disagreement existed between

commanders and non-commanders and, where appropriate, separate issues into two categories: those which might be addressed at unit level, and those which might be addressed at higher levels.

Unit Level Issues. Two issues on which commanders and non-commanders expressed different opinions seem appropriate for resolution at the unit level. The first issue is information flow. While commanders appear to be "getting the word", non-commanders do not. An increased effort on the part of commanders to insure their subordinates are kept informed would help reduce this area of difference. However, information flow is a two way street, and thus non-commanders should take advantage of every opportunity to keep themselves informed (e.g., attendance at staff meetings, commanders' calls). The issue of information flow is especially important. The lack of timely and accurate information can not only reduce employee efficiency, but also create an information vacuum which may lead to dysfunctional behavior on the part of organizational members. In the opinion of this writer, this is an area that deserves immediate attention.

The second issue on which commanders and non-commanders disagree is that of discipline and enforcement. It seems that this is also an issue best resolved at the unit level. Commanders are, in the opinion of this writer, in the best possible position to insure proper enforcement of standards and discipline. It would appear this is an issue which is much like the weather; a great deal of discussion, but little action. The data suggest that while commanders perceive discipline and enforcement of standards to be too lax, they are also the group which is in the best position to correct the situation, but have taken no action to do so. It is important to note however, that the differences between commanders and non-commanders in this

area are not the same as those manifested in the area of information flow. In this area, commanders are dissatisfied, while non-commanders appear comfortable with the present conditions. Therefore, an attempt by commanders to move toward stricter enforcement of standards may create more organizational problems than presently exist. This would be counterproductive from the viewpoint of trying to reduce the potential for alienation and conflict.

Higher Level Issues. Three issues seem appropriately addressed to Air Force policymakers. The first is the perception that being a commander is definitely preparation for future positions of greater responsibility (job growth). Directly related to this issue is the perception of job challenge. It appears that the opportunities for growth and challenge associated with the assignment as a commander have overshadowed similar opportunities found in other job assignments. Based upon this study, the general consensus is that the job of a commander offers more challenge and provides a better opportunity for job growth than almost any other job in the Air Force. If this perception is correct, then there is nothing that can be done to change it. If, however, this perception is incorrect, then top level policymakers might do well to publicize the fact that other jobs provide equal opportunities for growth and challenge.

The other issue which is appropriately addressed by the policymakers is that of military compensation versus civilian pay for similar work. The issue has often been addressed in terms of what military compensation actually consists of (e.g., fringe benefits in addition to pay), and how this total package is comparable to civilian pay. These efforts have had seemingly little impact on the perceptions of the military member.

This author suggests that the issue be addressed from the standpoint of the job opportunity in the military versus civilian industry. For example, could a pilot who has been with an airline for two years expect to be an aircraft commander? In the Air Force it is common to find first lieutenants assigned as aircraft commanders. Perhaps this issue is also related to those of job challenge and job growth.

Further Observations. During the course of this project some general observations were made regarding the nature of response patterns and issues which were important in segregating commanders and non-commanders. No extensive analysis or in-depth effort was made to isolate cause and effect relationships. However, the author believes these observations may "round out" some of the rather "dry" analytical results already presented. Furthermore, some of these observations may serve to inspire some further research in this area.

Commanders were more consistent in their opinions and perceptions than were non-commanders. That is, the response patterns for commanders displayed a consistency across questions adressing similar issues, whereas the same consistency was not generally observed for non-commanders. Commanders, as a group, presented more uniform responses than did non-commanders. A few key issues would serve to segregate commanders from non-commanders, while the non-commanders' groups would continue to subdivide on several more issues. For example, 13 predictors may have been used in the AID analysis to identify all of the final subgroups, while only 3 predictors were necessary to isolate commanders' groups and non-commanders' groups (i.e., the additional 10 variables added nothing to the final percentage of the population correctly classified). The consistency and uniformity

in the responses of commanders suggest that commanders, by nature of their organizational position, must take a definite stand on virtually all aspects of Air Force life. Meanwhile, non-commanders are under no such organizational "pressure" to take a firm position on the various issues before them.

A "generation gap" exists for both commanders and non-commanders between the various officer grades. A gradual shift in the issues which served to segregate commanders and non-commanders was noted as the analysis progressed from Colonels' groups to Lieutenants' groups. At one end of the spectrum, lieutenants were concerned about drills and ceremonies or the appropriateness of their tank; while at the other end of the spectrum, colonels were concerned about wear of the uniform or Air Force life in general. While it was not surprising to find a different outlook existing between the various groups, the author feels that careful examination of the issues which were important to each group will provide insight into where that group is at, where they are coming from, and where they hope to be going.

Finally, the author questions whether or not infrequent personal contact with supervisors is a handicap or a benefit. Commanders had less frequent contact with their supervisors for the purpose of setting personal performance objectives than did non-commanders. Commanders reported a greater degree of job freedom and job challenge than did non-commanders. Commanders also had higher job satisfaction than did non-commanders. It appears that all of these findings are related to the single issue of job autonomy. Perhaps the Air Force needs more of it.

Recommendations

It is recommended that the data base developed for use in this study be re-analyzed using discriminant analysis and factor analysis. These techniques would hopefully provide greater insight into potential sources of reduced mission effectiveness due to alienation and conflict. Eliminating some of the now obvious, and less meaningful, issues on which commanders and non-commanders differ (e.g., hours per week spent on the job) might also prove meaningful in further study.

Starting with sample populations containing approximately equal numbers of commanders and non-commanders would allow better identification of areas of significant disagreement between the two groups. Inclusion of data gathered by the AFMIG (1975) survey might also provide further insight into the differences between commanders and non-commanders.

With this study completed, a study of differences between commanders and enlisted personnel might prove highly informative. An initial analysis of differences between non-commanders and enlisted personnel could be used as a control data set. Thus, the differences existing between commanders and enlisteds which did not exist between non-commanders and enlisteds would be of primary interest.

Finally, it would be most beneficial to administer a questionnaire specifically designed to gather data concerning attitudes and perceptions to Air Force members. With such a data base it would then be possible to provide more definitive answers concerning the nature of differences which exist between commanders and non-commanders.

Bibliography

1. AFR 30-23. The Air Force Personnel Survey Program. Washington Department of the Air Force, September 1976.

2. Aiken, M. and J. Hage. "Organizational Alienation: A Comparative Analysis", American Sociological Review, 31: 497-507 (August 1966).

3. Albanese, R. Management: Towards Accountability for Performance. Homewood, Illinois: Richard D. Irwin, Inc., 1975.

4. Allport, G. Becoming. New Haven, Conn.: Yale University Press, 1955.

5. Argyris, C. Interpersonal Competence and Organizational Effectiveness. Homewood, Illinois: W. D-rsey Press, 1962.

6. Blau, P.M. and W.R. Scott. Formal Organizations. San Francisco: Chandler Publishing Company, 1962.

7. Blauner, R. Alienation and Freedom. Chicago: University of Chicago Press, 1964.

8. Borg, M. Conflict and Social Change. Minneapolis, Minnesota: Augsburg Publishing House, 1971.

9. Bottomore, T.B. Karl Marx: Early Writings. New York: McGraw-Hill, 1963.

10. Burns, T. and G.M. Stalker. Management of Innovation. London: Travistock Publications, 1961.

11. Carpenter, N. "Social Surveys", Encyclopedia of the Social Sciences, XIV. New York: McMillan Company, 1934.

12. Carroll, R. "Making A Good Air Force Better", Air Force Magazine, 58: 63-64 (November 1975).

13. Crozier, M. The Bureaucratic Phenomenon. Stanford: The Stanford University Press, 1963.

14. Davis, K. Human Behavior at Work: Organizational Behavior. (Fifth edition) New York: McGraw-Hill, 1977.

15. Downey, H.K., D. Hellriegel, and J.W. Slocum. "Individual Characteristics as Sources of Perceived Uncertainty Variability", Human Relations, 30: 161-174 (February 1977).

16. Drexler, J.A. Jr. "Organizational Climate: Its Homogeneity Within Organizations", Journal of Applied Psychology, 62: 38-42 (February 1977).

17. Eshbaugh, V.L. An Analysis of Factors Associated with the Job Satisfaction of United States Air Force Commanders. Unpublished Thesis. Wright-Patterson AFB, Ohio: Air Force Institute of Technology, September 1977.

18. Evans, W.M. "Hierarchy, Alienation, Commitment and Organizational Effectiveness", Human Relations, 30: 77-94 (January 1977).

19. Freund, J.E. Mathematical Statistics (Second edition). Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1971.

20. Franklin, J.L. "Down the Organization: Influence Processes Across Levels of Hierarchy", Administrative Science Quarterly, 20: 153-164 (June 1975).

21. Franklin, J.L. "Relations Among Four Social-psychological Aspects of Organizations", Administrative Science Quarterly, 20: 422-433 (September 1975).

22. Gee, W. Social Science Research Methods. New York: Appleton-Century-Crofts, Inc., 1950.

23. Gooch, L.L. Policy Capturing with Local Models: The Application of The AID Technique in Modeling Judgement. Unpublished dissertation. Austin: The University of Texas, 1972.

24. Gray, J.O. "New 'People' Study Launched", Air Force Magazine, 58: 75-76 (June 1975).

25. Gross, E. "Some Functional Consequences of Primary Controls in Formal Work Organizations", American Sociological Review, 18: 368-373 (August 1953).

26. Kelly, J. Organizational Behavior. Homewood, Illinois: Richard D. Irwin, Inc., 1969.

27. Kover, A.J. "Reorganization in an Advertising Agency", Human Organization, 22: 252-259 (Winter 1963-1964).

28. Labovitz, S. "The Assignment of Numbers to Rank Order Categories", American Sociological Review, 35: 515-524 (August 1970).

29. Likert, R. New Patterns of Management. New York: McGraw-Hill, 1961.

30. Likert, R. The Human Organization. New York: McGraw-Hill, 1967.

31. Louis, M.R. "How Individuals Conceptualize Conflict: Identification of Steps in the Process and Role of Personal/Developmental Factors", Human Relations, 30: 451-467 (May 1977).

32. Lourenco, S.V. "Conflict and Failure in Planned Change", Human Relations, 29: 1189-1203 (December 1976).

33. Manley, T.R., C.W. McNichols, and M.J. Stahl. Quality of Air Force Life: A Report on the Attitudes and Perceptions of Air Force Commanders. AFIT Technical Report 77-2. Wright-Patterson AFB, Ohio: Air Force Institute of Technology, April 1977.

34. Mathis, W.R. A Study of Military -Civil Service Differences in Quality of Life. Unpublished thesis. Wright-Patterson AFB, Ohio: Air Force Institute of Technology, December 1976.

35. McNichols, C.W., Stahl, M.J., and Manley, R.T. "The Validity and Reliability of Hoppock's Job Satisfaction Measure", Academy of Management Journal, 1978 (In Press).

36. Miller, G.A. "Professionals in Bureaucracy: Alienation Among Industrial Scientists and Engineers", American Sociological Review, 32: 755-768 (October 1967).

37. Mohr, L.B. "Authority and Democracy in Organizations", Human Relations, 30: 919-947 (October 1977).

38. Nie, N.H. C.N. Hull, J.G. Jenkins, K. Steinbrenner, and D.H. Bent. SPSS: Statistical Package for the Social Sciences (Second edition). New York: McGraw-Hill, 1975.

39. Pearlin, L. "Alienation from Work: A Study of Nursing Personnel", American Sociological Review, 27: 314-326 (June 1962).

40. Pugh, D.S., D.J. Hickson, C.R. Hinings, K.M. McDonald, C. Turner, and T. Lupton. "A Conceptual Scheme for Organizational Analysis", Administrative Science Quarterly, 8: 289-315 (December 1965).

41. Seeman, M. "On the Meaning of Alienation", American Sociological Review, 24: 211-217 (September 1959).

42. Sieler, J. Systems Analysis in Organization Behavior. Homewood, Illinois: Richard D. Irwin, Inc., 1967.

43. Sonquist, J.A. "Finding Variables That Work", Public Opinions Quarterly, 33: 83-95 (Spring 1969).

44. Sonquist, J.A., and J.N. Morgan. The Detection of Interaction Effects: A Report on A Computer Program For the Selection of Optimal Combinations of Explanatory Variables. Ann Arbor, Michigan: The University of Michigan, 1970.

45. Tagiuri, R. and G. Litwin. Organization Climate: Explorations of a Concept. Boston: Harvard University Press, 1968.

46. Tannenbaum, A.S. "The Concept of Organizational Control, The Journal of Social Issues, 12: 50-60 (1956).

47. Tannenbaum, A.S. "Control Structure and Union Functions", American Journal of Sociology, 61: 536-545 (May 1956).

48. Tannenbaum, A.S. "Control and Effectiveness in a Voluntary Organization", American Journal of Sociology, 67: 33-46 (July 1961).

49. Taylor, F. Scientific Management. New York: Harper & Row, 1947.

50. Terry, G.R. Principles of Management (Seventh edition). Homewood, Illinois: Richard D. Irwin, Inc., 1977.

51. Thomspon, T.N. A Study of Job Satisfaction in the United States Air Force. Unpublished thesis. Wright-Patterson AFB, Ohio: Air Force Institute of Technology, October 1975.

52. Udy, S.H. " 'Bureaucracy' and 'Rationality' in Weber's Organizational Theory: An Empirical Study", American Sociological Review, 24: 791-795 (December 1959).

53. Urwick, L. The Elements of Administration. New York: Harper & Row, 1943.

54. Woodward, J. Industrial Organizations: Behavior and Control. London: Oxford University Press, 1970.

55. Worthy, J.C. "Organizational Structure and Employee Morale", American Sociological Review, 18: 368-373 (August 1953).

APPENDIX A

COMMON QUESTIONS

Appendix A

Common Questions

1. What is your present active duty grade?

   1. Colonel
   2. Lieutenant Colonel
   3. Major
   4. Captain
   5. First Lieutenant
   6. Second Lieutenant

2. What is your major command of assignment?

   1. Alaskan Air Command
   2. U.S. Air Force Academy
   3. Aerospace Defence Command
   4. U.S. Air Forces in Europe
   5. Air Force Accounting and Finance Center
   6. Air Force Logistics Command
   7. Air Force Systems Command
   8. Air Reserve Personnel Center
   9. Air Training Command
   10. Air University
   11. Headquarters Air Force Reserve
   12. Headquarters USAF
   13. Air Force Data Automation Agency
   14. Headquarters Command
   15. Military Airlift Command
   16. Pacific Air Forces
   17. Strategic Air Command
   18. Tactical Air Command
   19. USAF Security Service
   20. Air Force Military Personnel Center
   21. Air Force Inspection and Safety Center
   22. Air Force Audit Agency
   23. Air Force Office of Special Investigations
   24. Other

3. How much total active federal military service have you completed?

   1. Less than 10 years
   2. 10 years but less than 11
   3. 11 years but less than 12
   4. 12 years but less than 13
   5. 13 years but less than 14
   6. 14 years but less than 15
   7. 15 years but less than 16
   8. 16 years but less than 17
   9. 17 years but less than 18
   10. 18 years but less than 19
   11. 19 years but less than 20
   12. 20 years but less than 21
   13. 21 years but less than 22
   14. 22 years but less than 23
   15. 23 years but less than 24
   16. 24 years but less than 25
   17. 25 years but less than 26
   18. 26 years but less than 27
   19. 27 years or more

4. Which one of the following do you consider yourself?

1. Black American
2. Spanish or Mexican American
3. American Indian
4. Oriental American
5. White American (other than Spanish or Mexican American)
6. Other

5. What is your sex?

1. Female
2. Male

6. What is your current primary aeronautical rating?

1. Pilot
2. Navigator
3. Flight Surgeon
4. Other type of aeronautical rating
5. Nonrated

The following four questions address the subjects of economic standards and security. Please rate the degree of importance of these concepts to you and your degree of satisfaction with them based on the descriptions shown below:

ECONOMIC STANDARD: Satisfaction of basic human needs such as food, shelter, clothing; the ability to maintain an acceptable standard of living.

7. What degree of importance do you attach to the above?

1.....2.....3.....4.....5.....6.....7
Low Importance — Medium — High Importance

8. To what degree are you satisfied with the ECONOMIC STANDARD aspects of your life?

1.....2.....3.....4.....5.....6.....7
Highly Dissatisfied — Neutral — Highly Satisfied

ECONOMIC SECURITY: Guaranteed employment; retirement benefits; insurance; protection for self and family.

9. What degree of importance do you attach to the above?

1.....2.....3.....4.....5.....6.....7
Low Importance — Medium Importance — High Importance

10. To what degree are you satisfied with the ECONOMIC ASPECTS of your life?

1.....2.....3.....4.....5.....6.....7

Highly Dissatisfied — Neutral — Highly Satisfied

11. How do you think your military pay (including all allowances and fringe benefits) compares with pay in civilian employment for similar work?

1. Military pay is far higher than civilian
2. Military pay is somewhat higher than civilian
3. Both about equal
4. Military pay is somewhat less than civilian
5. Military pay is far less than civilian

12. The Air Force is providing enough information to its members to permit them to determine the current status of actions which may impact on their fringe benefits (Commissary, retirement, medical care, etc.).

1. Strongly disagree
2. Disagree
3. Undecided
4. Agree
5. Strongly Agree

Listed below are a number of factors which have been associated with favorable attitudes toward an Air Force career.

FAVORABLE FACTORS

1. Opportunity for training and education in the Air Force
2. My Air Force job (challenging, provides sense of accomplishment, etc.)
3. Pay and allowances
4. Housing
5. Promotion system and opportunity
6. Fringe benefits (medical and dental care, BX, commissary, etc.)
7. Leadership and supervision in the Air Force
8. Travel and new experiences
9. Have "say" in future assignments
10. Security of Air Force life
11. Air Force policies and procedures
12. The retirement system
13. Opportunity to serve my country
14. Some other factor
15. I do not intend to make the Air Force a career

13. Select the one factor which TODAY would influence you the most to make the Air Force a career.

Listed below are a number of factors which have been associated with unfavorable attitudes toward an Air Force career.

UNFAVORABLE FACTORS

1. Family separation
2. My Air Force job (little challenge, little sense of accomplishment, etc.)
3. Pay and allowances
4. Housing
5. Promotion selection system
6. Promotion opportunity
7. Fringe benefits (medical and dental care, BX, commissary, etc)
8. Leadership and supervision in the Air Force
9. Frequent PCS moves
10. Little "say" in future assignments
11. Insecurity of Air Force life
12. The people
13. Air Force policy and procedures
14. Some other factor
15. Nothing unfavorable

14. Select the one factor which TODAY would influence you the most NOT to make the Air Force a career.

Please rate the degree of importance of free time to you and your degree of satisfaction with it based on the following description:

FREE TIME: Amount, use, and scheduling of free time alone, or in voluntary associations with others; variety of activities engaged in.

15. What degree of importance do you attach to the above?

1.....2.....3.....4.....5.....6.....7
Low Importance — Medium Importance — High Importance

16. To what degree are you satisfied with the FREE TIME aspects of your life?

1.....2.....3.....4.....5.....6.....7
Highly Dissatisfied — Neutral — Highly Satisfied

Please rate the degree of importance of your work to you and your degree of satisfaction with it based on the following description:

WORK: Doing work that is personally meaningful and important; pride in my work; job satisfaction; recognition for my efforts and my accomplishments on the job:

17. What degree of importance do you attach to the above? (Select one of the seven points)

```
    1.....2.....3.....4.....5.....6.....7
   Low            Medium            High
Importance     Importance        Importance
```

18. To what degree are you satisfied with the WORK aspects of your life?

```
    1.....2.....3.....4.....5.....6.....7
  Highly                              Highly
Dissatisfied      Neutral           Satisfied
```

19. Which one of the following shows <u>how much of the time</u> you feel satisfied with your job?

1. All the time
2. Most of the time
3. A good deal of the time
4. About half of the time
5. Occasionally
6. Seldom
7. Never

20. Choose the <u>one</u> of the following statements which best tells how well you like your job.

1. I hate it
2. I dislike it
3. I don't like it
4. I am indifferent to it
5. I like it
6. I am enthusiastic about it
7. I love it

21. Which <u>one</u> of the following best tells how you feel about changing your job?

1. I would quit this job at once if I could
2. I would take another job in which I could earn as much as I do now.

3. I would like to change both my job and my occupation
4. I would like to exchange my present job for another one
5. I am not eager to change my job, but would for a better one
6. I cannot think of any jobs for which I would exchange
7. I would not exchange my job for another

22. Which one of the following shows how you think you compare with other people?

1. No one likes his job better than I like mine
2. I like my job much better than most people like theirs
3. I like my job better than most people like theirs
4. I like my job about as well as most people like theirs
5. I dislike my job more than most people dislike theirs
6. I dislike my job much more than most people dislike theirs
7. No one dislikes his job more than I dislike mine.

23. How do you evaluate your present Air Force job?

1. Not at all challenging
2. Not very challenging
3. Somewhat challenging
4. Challenging
5. Very challenging

24. Do you think your present job is preparing you to assume future positions of greater responsibility?

1. Definitely no
2. Probably no
3. Undecided
4. Probably yes
5. Definitely yes

25. For your next assignment, do you want a job which has greater responsibility than your current job?

1. Definitely no
2. Probably no
3. Not sure
4. Probably yes
5. Definitely yes

26. Do you feel that the work you are now doing is appropriate to the grade you hold?

1. My grade is much too high for the work I am doing
2. My grade is somewhat too high for the work I am doing
3. My grade is about right for the work I am doing

4. My grade is somewhat too low for the work I am doing
5. My grade is much too low for the work I am doing

27. What is your estimate of the average number of hours per week you spend on the job?

1. Less than 30 hours
2. 31 - 35
3. 36 - 40
4. 41 - 45
5. 46 - 50
6. 51 - 55
7. 56 - 60
8. More than 60

28. The Air Force requires me to participate in too many activities that are not related to my job.

1. Strongly disagree
2. Disagree
3. Undecided
4. Agree
5. Strongly agree

One of the aspects of our lives is the Leadership/Supervision we receive on the job. Please rate the degree of importance of this factor to you and your degree of satisfaction with it based on the following description:

LEADERSHIP/SUPERVISION: My supervisor has my interests and that of the Air Force at heart; keeps me informed; approachable and helpful rather than critical; good knowledge of the job.

29. What degree of importance do you attach to the above? (Select one of the seven points).

1.....2.....3.....4.....5.....6.....7
Low Importance — Medium Importance — High Importance

30. To what degree are you satisfied with the LEADERSHIP/SUPERVISION aspects of your life? (Select one of the seven points)

1.....2.....3.....4.....5.....6.....7
Highly Dissatisfied — Neutral — Highly Satisfied

31. What is your opinion of the leadership ability of your immediate supervisor?

1. Excellent
2. Above average
3. Average
4. Below average
5. Poor

32. What is your opinion of the quality of leadership in the Air Force?

1. Excellent
2. Above average
3. Average
4. Below average
5. Poor

33. What is your opinion of discipline in today's Air Force?

1. Too strict
2. Somewhat strict
3. About right
4. Somewhat lax
5. Too lax

Listed below are 23 factors or policies which affect Air Force personnel. Using the scale listed immediately below, please rate each of the areas. Mark only one response for each item.

1. Standard too strict, enforcement too strict
2. Standard too strict, enforcement about right
3. Standard too strict, enforcement too lax

4. Standard about right, enforcement too strict
5. Standard about right, enforcement about right
6. Standard about right, enforcement too lax

7. Standard too lax, enforcement too strict
8. Standard too lax, enforcement about right
9. Standard too lax, enforcement too lax

34. Overall personal appearance.

35. Wear of uniform.

36. Haircuts.

37. Mustaches.

38. Beard Policy.

39. Military courtesy and customs.

40. Personnel weight control program.

41. What my immediate supervisor expects of me.

42. My commander's policies and procedures.

43. Officer/enlisted on-the-job relationships.

44. Drills and ceremonies.

45. Respect for supervisors.

46. Safety procedures.

47. Working hours.

48. Leave procedures.

49. Living in on-base family housing.

50. Living in on-base dormitories.

51. Quality of work expected on the job.

52. Quantity of work expected on the job.

53. Officer supervisor/subordinate relationships.

54. Enlisted supervisor/subordinate relationships.

55. Unit mission accomplishment.

56. Air Force life in general.

57. The Air Force does a good job of keeping me informed about what is going on.

    1. Strongly disagree
    2. Disagree
    3. Undecided
    4. Agree
    5. Strongly agree

58. How often do you and your supervisor get together to set your personal performance objectives?

    1. Never
    2. Seldom
    3. Sometimes
    4. Frequently
    5. Very frequently

59. How often are you given feedback from your supervisor about your job performance?

1. Never
2. Seldom
3. Sometimes
4. Frequently
5. Very frequently

60. Does your immediate supervisor give you recognition for a job well done?

1. Never
2. Seldom
3. Sometimes
4. Frequently
5. Always

61. Are you given the freedom you need to do your job well?

1. Never
2. Seldom
3. Sometimes
4. Often
5. Always

Please rate the degree of importance of the concept of equity to you and your degree of satisfaction with it based on the following description:

EQUITY: Equal opportunity in the Air Force; a fair chance at promotion; an even break in my job/assignment selections.

62. What degree of importance do you attach to the above?

1.....2.....3.....4.....5.....6.....7
Low Importance — Medium Importance — High Importance

63. To what degree are you satisfied with the EQUITY aspects of your life?

1.....2.....3.....4.....5.....6.....7
Highly Dissatisfied — Neutral — Highly Satisfied

64. On the same jobs as men, do Air Force women tend to do more, less, or about the same amount of work?

1. Much more
2. More
3. About the same
4. Less
5. Much less

Please rate the degree of importance of personal growth to you and your degree of satisfaction with it based on the following description:

PERSONAL GROWTH: To be able to develop individual capacities, education/training; making full use of my abilities; the chance to further my potential.

65. What degree of importance do you attach to the above?

4.....5.....6.....7.....8.....9.....10
Moderate Importance — High Importance — Very High Importance

66. To what degree are you satisfied with the PERSONAL GROWTH aspects of your life?

1.....2.....3.....4.....5.....6.....7
Highly Dissatisfied — Neutral — Highly Satisfied

67. For the most part, how suitable for your needs was the course material in the NCO Orientation Course (Phase I, NCO PME)?

1. Excellent
2. Good
3. Fair
4. Poor
5. Have not attended the course
6. Not applicable, I am an officer

Not equivalent to question on other survey

68. Overall, my attendance at the NCO Orientation Course (Phase I, NCO PME) was a good, useful investment of my time and effort.

1. Strongly disagree
2. Disagree
3. Inclined to disagree
4. Undecided
5. Inclined to agree
6. Agree

Not equivalent to question on other survey

7. Strongly agree
8. Have not attended the course
9. Not applicable, I am an officer

69. Air Force training programs do not do a very good job of preparing people to get along with other people.

1. Strongly disagree
2. Disagree
3. Undecided
4. Agree
5. Strongly agree

Not equivalent to question on other survey

70. Today's Air Force training programs should devote some time to help prepare people to get along with each other better.

1. Strongly disagree
2. Disagree
3. Undecided
4. Agree
5. Strongly agree

71. Human Relations Education courses are effective in bringing about better working relations on the job.

1. Strongly agree
2. Disagree
3. Undecided
4. Agree
5. Strongly agree

Please rate the degree of importance of the concept of personal standing to you and your degree of satisfaction with it based on the following description:

PERSONAL STANDING: To be treated with respect; prestige; dignity; reputation; status.

72. What degree of importance to you attach to the above?

4.....5.....6.....7.....8.....9.....10
Moderate Importance — High Importance — Very High Importance

73. To what degree are you satisfied with the PERSONAL STANDING aspects of your life?

1.....2.....3.....4.....5.....6.....7
Highly Dissatisfied — Neutral — Highly Satisfied

74. Recent changes in Air Force personnel programs have been aimed at enhancing NCO prestige. Do you believe these efforts will be successful?

1. Definitely yes
2. Probably yes
3. Undecided
4. Probably no
5. Definitely no

75. The prestige of the military has declined over the past several years.

1. Strongly disagree
2. Disagree
3. Undecided
4. Agree
5. Strongly agree

76. Most of the Senior NCO's (E7-E9) understand and are able to communicate with the people who work with them.

1. Strongly disagree
2. Disagree
3. Undecided
4. Agree
5. Strongly agree

Please rate the degree of importance of health to you and your degree of satisfaction with it based on the following description:

HEALTH: Physical and mental well-being of self and dependents; having illnesses and ailments detected, diagnosed, treated and cured; quality and quantity of health care services provided.

77. What degree of importance do you attach to the above?

4.....5.....6.....7.....8.....9....10
Moderate Importance — High Importance — Very High Importance

78. To what degree are you satisfied with the HEALTH aspects of your life?

1.....2.....3.....4.....5.....6.....7

Highly Dissatisfied	Neutral	Highly Satisfied

Vita

Steven Rudd was born on 26 September 1944, in Oak Park, Illinois. His youth was shared between the suburbs of Chicago and the Mesabi Iron Range area of northern Minnesota. In March of 1964 he enlisted in the United States Air Force. After two years with the Air Defense Command in California and Nevada, he was assigned to Tainan Air Base, Taiwan in late 1966. In 1968 he was transferred to Tachikawa Air Base, Japan, and spent the next three years touring the Far East as a Team Chief with the 2875th GEEIA Squadron.

Selected for the Airmans' Education and Commissioning Program (AECP), TSgt Rudd and his family were transferred to Auburn, Alabama, in 1971. Two years later he was graduated from Auburn University with a Bachelors degree in Physics.

After OTS and 19 weeks at Keesler AFB learning to be a Communications Maintenance Officer, Second Lieutenant Rudd was reassigned to the Land of the Rising Sun. He spent the next 18 months as the Chief of Maintenance for the 1953rd Communications Squadron (AFCS) at Misawa Air Base, Japan. Returning to the CONUS in 1975 he was reassigned as the Chief of Maintenance for the 1879th Communications Squadron (AFCS) at Richards-Gebaur AFB, Missouri. In June of 1977 Captain Rudd entered the Air Force Institute of Technology as a graduate student in Systems Management.

He is married to the former Yeh Li of Tainan, Taiwan. He and his wife have two children.

Permanent address: 15039 N. 38th Dr.
Phoenix, Arizona
85023

Unclassified

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER AFIT/GSM/SM/78S-18	2. GOVT ACCESSION NO.	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle) AN INVESTIGATION OF ATTITUDINAL DIFFERENCES BETWEEN COMMANDERS AND NON-COMMANDERS IN THE UNITED STATES AIR FORCE		5. TYPE OF REPORT & PERIOD COVERED M.S. Thesis 6. PERFORMING ORG. REPORT NUMBER
7. AUTHOR(s) Steven Rudd Capt USAF		8. CONTRACT OR GRANT NUMBER(s)
9. PERFORMING ORGANIZATION NAME AND ADDRESS Air Force Institute of Technology (AFIT/EN) Wright-Patterson Air Force Base Ohio, 45433		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS
11. CONTROLLING OFFICE NAME AND ADDRESS Air Force Institute of Technology (AFIT/EN) Wright-Patterson Air Force Base Ohio, 45433		12. REPORT DATE September 1978 13. NUMBER OF PAGES 137
14. MONITORING AGENCY NAME & ADDRESS(if different from Controlling Office)		15. SECURITY CLASS. (of this report) Unclassified 15a. DECLASSIFICATION/DOWNGRADING SCHEDULE

16. DISTRIBUTION STATEMENT (of this Report)

Approved for public release; distribution unlimited

17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)

18. SUPPLEMENTARY NOTES

Approved for public release; IAW AFR 190-17

JOSEPH D. HIPPS, Major, USAF
Director of Information

19. KEY WORDS (Continue on reverse side if necessary and identify by block number)

Attitudinal differences	Quality of life
Alienation	Standards and Enforcement
Conflict	Work
Commander	Leadership and supervision
Non-commander	Survey

20. ABSTRACT (Continue on reverse side if necessary and identify by block number)

This study sought to identify and analyze attitudinal and perceptual differences existing between Air Force commanders and non-commanders. Four subject areas were examined prior to a final analysis: Quality of Life, Leadership and Supervision, Standards and Enforcement, and Work. The data sources for this study were two Quality of Air Force Life surveys conducted in December 1976 and April 1977. The analysis technique used was the Automatic Interaction Detector (AID) algorithm. AID is a computerized,

DD FORM 1 JAN 73 1473 EDITION OF 1 NOV 65 IS OBSOLETE

Unclassified

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

sequential analysis of variance technique which attempts to isolate homogeneous groups within a larger population.

The primary conclusion drawn from the analysis is that significant differences exist between commanders and non-commanders which are attributable to organizational position (i.e., commander or non-commander). While these differences manifest themselves over a variety of issues, the most recurrent are:

1. Frequency of contact with supervisor
2. Job satisfaction
3. Hours per week spent on the job
4. The perception of job growth
5. Information flow

Other issues on which some commanders and some non-commanders (dependent upon grade) held significantly different opinions were also identified.